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TO OUR CONTRIBUTORS

JIE invites articles/papers on the impact of educational research on classroom practices and policy decisions. Specific examples where this impact is apparent may be given.

— GENERAL EDITOR

Education : Its Disciplinary Identity

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The present paper makes an indepth analysis of the nature of disciplines to examine the question, 'Is education a discipline?' The paper concludes that disciplinary pursuits are no longer confined to abstract and theoretical formulations alone. Disciplinary diversification of knowledge has led to the emergence of interdisciplinary and multidisciplinary approaches, beyond a certain limit, it is necessary to appreciate the complementary perspective of other disciplines to develop a holistic view of discipline, instead of the compartmentalised perspectives.

A FREQUENT question that confronts a student of education is **Is Education A Discipline ?** At least two camps of academicians with diametrically opposite views have been debating on this. Considerable explanations are proffered pointing out the extent to which education befits the characterisation of a discipline. The propounders of this view even go to the extent of proving the limitations of the other social sciences as disciplines in order to defend education as a discipline. On the other hand, education is seen as an operational aspect in society which draws from every other social

sub-system for its functioning. And so as an applied area it cannot have a distinct disciplinary status. Such continued debate has puzzled us over the years. The diffidence which is reflected in both the arguments at the root lurks, as the substantive contours of education are not very clearly discernible, its concepts, by and large, have been extended from other cognate disciplines; it shares its methodology of generating its know-how with other disciplines and does not have a distinctness of its own unlike other disciplines like psychology and sociology which also originated as break-

aways from philosophy. In the absence of a distinct, discernible status, by generating its own concepts, education is yet to become technically tight and terse to be recognised as a specialisation beyond the reach of the lay person. Should education be like other social sciences to become a discipline? Are they well defined, distinct, stable and inflexible? How does a 'discipline' maintain its identity without sacrificing its linkages with other disciplines? These and several similar questions need further articulation. What follows represents such an attempt.

Education is a process, a design for causing anticipated learning in individuals. This learning represents changes in individuals which are basically intrinsic but get manifested in action forms in different situations through improvement in individual life. There would also be a qualitative improvement in the life of collectivities. Schools and colleges have become the widely recognised educational institutions ensuring that individuals 'experience education' and schooling is a term connoting institutionalised learning. In other words, education has in direct focus the quality of life of individuals in society under given conditions. Educational practice pertains to deriving substance from the overall body of disciplinary knowledge, formulating them into transactable curricular forms, making choices of curricular components and also deciding the modes of transacting them. Such actions for selectivity make education an action-oriented, practice-based programme or activity. Deriving curricular substance from knowledge of different disciplines is a complex activity because of at least two reasons. Firstly, not only do knowledge components have to be delineated so as to suit the educational purpose but also to ensure that appropriate rules, techniques and tools are put into application properly and the disciplinary perspective is ascertained. sec-

ondly, both, the knowledge in the disciplines and their social relevance keep changing or evolving, necessitating appropriate revisions in the curricular choices made. For this, the educational practice has to have a perspective or intellectual context for its execution which is peculiar to education.

Within a society, conscious efforts will always be made to impart learning that could be socially relevant *vis-à-vis* the goal of quality improvement in life. Education would represent all such forces and influences generated in the society, of which institutionalised learning is but a part. Institutionalised learning is "controlled" through curriculum, teacher, examination etc. Yet, education cannot prevent several manipulated behavioural changes in individuals which are intrinsic to educational situations and also come as a result of other forces in the environment. As learning is intrinsic to the individual and experiential in nature, the extent of absorption of intended forms of knowledge and behaviours varies among individuals and groups. This is the main criterion which distinguishes a knowledgeable person from an educated or wise man. The former would be the successful outcome of institutionalised learning: an expert capable of effective application of the knowledge acquired. In this he is a practitioner, a professional. The latter, on the other hand, is one who, in addition to all these characteristics has acquired the ability to modify his schooling suitably through his experiences in the society and can distinguish the positive, the relevant from the negative, the not necessary from his 'unintended' learning. The educated person is, thus, not a mere professional but a scholar too.

Similarly the main purpose of educational institutions is to 'educate' learners. However, in as much as they operate within the larger societal context they are exposed to and actively interact with other aspects of life such

as social, economic and political, with mutually influencing impacts

Nature of Disciplines

Discipline refers to a specific area of study — a branch of knowledge. At the present stage of social evolution, most knowledge is available, rather perceived or recognised as 'substance' in different disciplines. A discipline is recognised by a certain distinctness it reveals in its substance and methodology.

A discipline is a deliberate differentiation of the knowledge base (K-base) with a specific perspective in order to gain better understanding of the phenomenon under focus. This makes the concepts, principles and constructs which represent knowledge generated intrinsic to that particular perspective and hence these acquire distinct connotations. In other words knowledge such as concepts, constructs and principles, has connotations in different disciplines, though they represent the same phenomenon or set of phenomena. The development of disciplines is a necessary aspect of social evolution. Disciplines evolve and differentiate continuously just as the human effort continues to understand the environment in an increasingly penetrating and comprehensive manner.

Differently put, the generalised K-base which represents the sum total of the human understanding of environment cumulated upto any given time gets articulated as explanations of phenomena of a particular kind as well as other phenomena as they seem from a specific point of view, rendered in universally applicable form. The evolution of a discipline begins with knowledge which develops through social experience or interaction between human minds and the environment in the form of a personalised experience of a particular cultural milieu which might have typical connotations and gets translated into universally

applicable terms, in objective conceptual form, cutting across all cultural and experiential barriers, and thus gets formulated as disciplines.

Knowledge within each discipline gets generated continuously, becoming increasingly specialised and hence less amorphous. Explanations get sharpened in respect of the more subtle aspects of the concerned phenomena. In brief, disciplines are that aspect of the evolution of the K-base, which render the more generalised, amorphous, comprehensive knowledge generated through social experience into well-defined, logically sound, intrinsically coherent and consistent arrangement of knowledge comprising concepts, constructs, principles and theories set in a specific perspective, available in universally discernible forms. That is, disciplines are derived from the K-base but get formulated in recognisable differentiated forms of both substance and methodology. The large number of disciplines indicates the diversity of phenomena that requires to be understood in different perspectives, further, with increasing knowledge, newer foci and better ways of studying the environment are continuously identified. Besides this continuity, knowledge, especially disciplinary knowledge, shares the two significant characterisations of the social context, viz., diversification and differentiation. The pursuit of knowing in any discipline acquires a distinctive nature with regard to the form of knowledge it generates, the axiomatic framework with which it is generated and the behavioural attributes of the personnel who generate it like sharing the meanings of concepts and other forms of communication. Due to these epistemological considerations and actual methodological and conceptual details disciplinary persuasions acquire some kind of artificiality in the sense that they get to some extent, altered, as may be the case for disciplines involving laboratory experiments.

under controlled conditions, this may lead to very great amount of uniqueness in the descriptions due to the utilisation of specialised constructs as may be the case in disciplines involving participant observation and interpretative techniques. Still different disciplines may highlight pluralism in the phenomenon and reveal considerable scope for creativity and imaginative insights as may be the case in the humanistic disciplines. In all forms of disciplinary pursuits however the emphasis is on the academic and intellectual aspects with a view to exploring the theoretical essence underlying any experience. It is the theoretical outcomes of academic pursuits in any discipline that give structure to knowledge within its domain. With continued pursuits the structure of knowledge keeps on evolving.

As can be seen, it is this perspective with which the revealed experience is to be observed and articulated. Further it is the perspective that gets at the base of any theoretical explanation. It is in this sense that 'perspective with which knowledge structures are to be viewed becomes an essential characteristic of a discipline. In other words the perspective of disciplinary knowledge renders it distinctive and identifiable among several others. Perspective implies a particular set of parameters and assumptions which provide a certain connotation to the variables or concepts and their relationships. This is very clearly perceived in the way disciplines developed. Man adopted organised social life for its obvious advantages over individual living. But this demanded several readjustments in individual behaviour — giving up several behaviours, acquiring new ones which were sensitive to and accommodative of the feelings, needs and thoughts of other human beings — in order to benefit from living. At this stage of social evolution, centred on individual and social life, the available natural resources, the

possible dangers from the environment, needed behaviours in groups and so on. Yet, these did not get formulated into disciplinary forms and remained as personalised experiences of individuals and groups. With increasing knowledge from experience, the human being began to differentiate his understandings and experiences, to categorise them and to consolidate them within some parametric limits. This could be achieved through observations, comparison of observations and by stating them in forms which others could understand and perceive to be relevant. Generalised statements about how events occur in a wider space-time frame, thus had to be made which could not be limited to personalised experiences. All explanations given by a discipline, thus, not only pertain to a particular kind of phenomenon but are also based upon a particular set of assumptions and parameters. This means when and if these are changed the explanations also will have to vary.

Perspective distinctness is a necessary character of a discipline for practical as well as cognitive reasons. It helps demarcate experience in a particular focus thus reducing the complexity in understanding the phenomenon or conversely enabling a more penetrating scrutiny of the phenomenon in a singular or specified perspective. Sharing of knowledge among academicians pursuing it in a discipline becomes more precise, easy, progressive and efficient as they share a common perspective and consequently also a common terminology. As knowledge expands within each discipline, diversification of it is an inevitable consequence of penetrating scrutiny. The specialised view becomes a requirement and a 'total' mastery of the entire discipline by a single individual a lesser possibility. Diversified knowledge leads to expansion of the substantive contours of a discipline and, beyond a limit of expansion, viewing operations of several concepts in a joint context 'outside' its own

boundaries also becomes necessary. Such a 'combined' perspective not only becomes a substantive need but also a cognitive support as it provides for a more comprehensive 'near-real' understanding of the way concepts function in the environment. Over a period of time, such extensions result in the emergence of newer disciplines. Newer disciplines thus evolved can continue with a combined perspective as in the case of bio-chemistry, biophysics, micro-biology, social psychology and so on. These are sometimes referred to as 'hybrid' disciplines and have interdisciplinarity. They can also acquire a definite 'new' perspective and break away from the original discipline. For instance, disciplines like psychology, sociology and political science grew out of social and moral philosophy. As the fragmentation of older disciplines took place, and newer political and social demand increased, newer areas of knowledge emerged. Such areas got represented by not only those disciplines which claimed to be academic in nature and asserted to be scientific in approach and substance, but also those 'professional' areas of study which related to more direct work and reform in the society. Areas of study like education, social work, administration and management, engineering and technology, medicine and health services, and business studies are in this category. They all in some form claimed to contain a version of social sciences as the prime analytical and reforming tool which gives confidence in initiating action for causing development in the society.

Each discipline with its knowledge boundaries and epistemological details also has well identified education and training procedures through specified contents. It is this aspect of the discipline which makes its knowledge 'teachable' and provides the scope for the continuous induction of personnel into it who take the discipline to higher levels. It is through

this process that the knowledge structures of the discipline keep evolving continuously; and their validity and significance remain under constant scrutiny. This feature of knowledge in a discipline presents a great methodological challenge. The discipline has to have and evolve appropriate mechanisms to judge the validity of explanations by establishing their relevance and adequacy. Lack of relevance and adequacy even to a small degree, will make a case for seeking further evidence and look for newer relationships, and even seek modification or replacement of the paradigms in use. This methodological process of continuously scrutinising, evaluating and treating concepts and theories for their worth, provides a pay-off system in a discipline that keeps knowledge structures as well as the methodology dynamic and evolving.

The characteristics of a discipline as detailed above indicate that disciplines are not **stable, consistent** entities. They change continuously not only in respect of substantive capaciousness and methodology but also in terms of their function in the social context. They are dynamic, ever changing internally and externally. Disciplines change their connotations due to social and academic demands. It is like problem solving — finding the limitations of available explanations and methodology and trying to redefine, discover or evolve relevant ways of extending understanding in the field. Such a process has reached a stage of knowledge-generation endeavour when disciplines have got their boundaries loosened, their interfaces with each other more pronounced and, at the same time, higher levels of specifications within each discipline have increased. At present, disciplines are faced with this dilemma which is a definite academic challenge. There is an increasingly perceived need for specialised knowledge in a narrower field and also to see knowledge in an interdisciplinary

perspective so that its social relevance is better achieved.

Education as a Discipline

Articulations on education as a discipline pertain to the process of concept generation and conceptualisation to the kind of discipline it is—social science or any other—as well as to the nature and process of evolving the methodology of knowledge generation in education. Viewing education as a disciplinary area raises doubts, mainly due to its nature. Skepticism has been mainly on the appropriateness of an action-area like education being rendered into disciplinary form. While some conceptualisation would be possible on any action, the extent to which this can be consolidated into parameters of disciplinary rigour is questioned. Several concepts in education have been adopted from other disciplines hinting at the possible confusion in the premises and perspectives that could arise when they are brought into one framework. Further human history abounds in revealing society's high expectations placed on education all along in the form of proverbs, folklore and the commonplace statements of wisdom as to what is education, the qualities of the 'educated', the outcome of education, etc. These indicate that education has always been a matter of common concern in society with every other aspect of society impinging on its operation. This is the reason for education not developing as a discipline till recently. This is suggestive of the lack of distinctiveness in educational phenomena which can be conceptualised. Despite all such arguments, education has been an emerging discipline for several decades now. The developments in knowledge, especially in social sciences and humanities coupled with those in the social, economic and political spheres led to the recognition of education as more than a knowledge transmission activity. The emer-

gence of the contemporary public school system necessitated a formalised teacher preparation programme. Initial formalised efforts to 'conceptually' represent the *what* of the teaching-learning process, how to effectively carry it out, how learning takes place, how to teach what, which skills are needed for the teacher, and a whole lot of relevant accessories to the school teacher, needed to be generated. Having begun thus, the disciplinary persuasions in education have enlarged greatly providing conceptual articulations about not only the pedagogic aspects of education but also several others. The way such conceptualisation takes place through discerning and consolidating the understanding of phenomena and processes, identifying the concepts, either from other disciplines or from one's own, defining them in one's own disciplinary connotations and explaining the way they function and their possible relationships or linkages, represents the way a discipline develops. It is relevant to recognise the way this process of conceptualisation has been occurring in education and the methodology evolving alongside. Significantly, such developments have surfaced certain issues of both substantive and methodological nature that education confronts. It is also interesting to understand one special characteristic of education like any discipline dealing with an 'action' dimension in society — advances in conceptualisation in education have influenced certain events and actions in the field at different times, conversely the events have led to further advancements in conceptualisation.

Concepts in Education

That education draws its concepts from other disciplines is a standing criticism advanced for disallowing it a disciplinary status. While adopting and utilising concepts from other disciplines are no barrier to the development of

a discipline; the criticism would be valid to the extent to which education fails to generate its own connotations to those concepts. Ensuring this requires an analysis of the concepts and the expanse of conceptual domain in education.

If one looks for concepts in education, one does find them in plenty, such as, curriculum, syllabus, teaching, vocationalisation, examination, work experience, class, textbooks, teaching-aids, teaching methods, literacy, numeracy, drop-out, instruction, etc. They appear to be exclusively concepts of education. However, there are many other concepts which are used in education such as learning, motivation, habits, individual differences, intelligence, interpersonal relations, equality of opportunity, positive discrimination, under-achievement, over-achievement, instructional strategy, instructional module, instructional system, cultural heritage, national integration, input, output, systems approach, technology, allocation, cost-effectiveness, feasibility, accreditation, opportunity cost, consciousness, social justice, constitutional directives, merit, aptitude, management, environment, climate, counselling, guidance, etc. Many of these are used with an adjective 'educational' without which they fall in any other area(s). It is often said that these are concepts from other disciplines 'borrowed' into education. This may be true of many concepts in many disciplines, to some extent for all disciplines. Concepts like 'effectiveness' and 'efficiency' are used in disciplines of natural sciences, social sciences, humanities and many other areas of study which may still be seeking their distinct identities. But, the mere use of concepts across disciplines does not help in identifying distinctiveness of a discipline with the help of concepts unless more basic and peculiar connotations to concepts are discerned and associated within a discipline. In respect of education, the concepts that are 'borrowed' from other disciplines are not used

with the identical connotations which they had in the disciplines of their origin. For example, 'effectiveness' when used for studying the effectiveness of a teaching method in terms of students' achievement is not used in the same way as a psychologist would use the term. The 'effectiveness' of a method of teaching is not decided solely on the basis of students' achievement. The appropriateness of the method has many of the considerations as well, such as, the method should not create situations from which threat, fear, discouragement, torture, indoctrination will emanate, instead it should promote a congenial and participative environment. These aspects cannot be associated with effectiveness if psychology, as the science of behaviour, has to be the sole consideration. Perhaps, these may cause quicker learning, yet indoctrination, and corporal punishment are not to be considered appropriate methods of teaching, and are banned through institutionalised legal provisions. When these aspects are combined with bare scientific effectiveness, the concepts turn into educational concepts giving them a distinctiveness peculiar to education as a discipline. This points to the need to examine the element of 'scientificism' and its degree in pedagogical science, as well as the association of other 'non-scientific' elements with which it operates. Similarly, the contribution of sociologists, philosophers, anthropologists, etc., gets restricted to understanding certain situations and they get circumvented by considerations that are not theirs but are basic to education. Through this process concepts acquire meanings which are essentially educational. Again, concepts like cost-effectiveness and curricular choices cannot be defined in the same way as one would do in economics. Economy of inputs and maximisation of profit cannot be the sole guiding consideration in education. Certain inputs, if educationally valuable, may have

to be provided even if they are cost-ineffective. Similarly, curricular choices cannot be made in a freer manner to suggest only material gains etc. considerations related to relevance as perceived by the learner and others have to prevail. Thus all concepts used in education, which are seemingly from other disciplines, turn at some stage into educational concepts and acquire newer meanings.

In this sense the concerns of disciplines like psychology, philosophy, sociology are larger as there are no restrictions put on them whereas concepts from these disciplines which are studied in education are more restricted by the superimpositions of other considerations. In another sense however, the concerns of educational concepts, when considered as those served, when they were in original disciplines and those added by other considerations are wider in nature.

It can thus be said that the features of education, namely, its purposive nature, its practice-oriented nature, deliberate support to encourage free and participative nourishment of consciousness, etc. play a major role in developing concepts in education or rendering these concepts educational even if their origins lie in other disciplines.

Expanse of Substance in Education

It is in the fitness of things to take a brief overview of the expanse of the substantive area education has come to encompass, having begun as a response to the felt need of teacher education sometime during the nineteenth century. It is also pertinent to point out that conceptual articulations on education were made even before. They were in the form of philosophical analysis of the purpose of education, nature of man especially the educated man, the role of teacher to exert positive influence on the individual, etc. Other disciplines like psychology and sociology, which were 'off-

shoots of philosophy, also dealt with particular aspects and concepts in education. However, such articulations were made in the perspectives of those disciplines and were not 'educational' in essence. Visualising a formal programme of teacher preparation for secondary schools posed the question: 'what should be the substance of such a programme?' So, began efforts to generate learning on teaching, and the teacher's role in instructional settings within the school. This marks the emergence of education as an independent area of a study and understanding.

Naturally, the initial conceptualisation in education pertained to teaching and learning at the school level. Attempts were made to describe and explain the teaching-learning process in as many details as possible including its components. This brought in articulations on teacher, teaching, learner, learning and content. These pertained to what a teacher does during the instructional process, how he does it and how he could do it effectively, alternatives available, attributes of an effective teacher, and so on. The main questions related to teaching included what it is, designing teaching, curricular choices to be made, curricular transaction modes or teaching methodology, and so on. Similarly, learner characteristics, background, cognitive, emotional, psychomotor, growth and development, motivation, interests, how he learns, learner performance and other learner related aspects came in for scrutiny. Learning being the objective of teaching, the way it occurs, under what conditions it can be accentuated when and why it does not occur, and similar aspects became the focus of debate. Curricular components (the what, how, how much and when) principles and techniques of generating relevant curricular components, etc., gained attention. On these aspects, efforts to explore and find out more effective and comprehensive explanations con-

tinue Psychology supplied a lot of conceptual substance with respect to several of these instructional aspects. In fact, the initial 'substance' of education was in the form of applications of psychological principles and 'educational implications' of psychological knowledge. For quite some time the over bearing influence of psychology on the process of knowledge generation in education continued to the near neglect of other orientations. Significant contributions have been made by persons with distinct allegiance to particular schools of thought in psychology. The behaviourist and the cognitive schools top the list. Themes of learning and motivation are a good example of this. Skinner's experimental studies based on the operant conditioning theory of learning are aimed at finding out the way to shape the learner's behaviour by manipulating the environment through proper scheduling of reinforcement. In fact, many other studies based on 'input-process-output', 'mastery learning' concepts attempt to understand teaching-learning in a scientific way allowing use of concepts and taking support of assumptions as it is done in the physical sciences. On similar lines, Flanders attempted to understand teaching behaviour, mainly the verbal ones, as a continuum to get various types of behaviour to produce certain effects on pupil behaviour. Thus, while scientific studies of this kind enhance understanding about teaching-learning to a great extent, and also help in developing useful insights to improve its effectiveness, it must be recognised that these concepts cannot be used in the studies aiming at the understanding of teaching-learning without a suitable 'rider' to render them appropriate.

Another set of understandings were about teacher and teacher behaviour in instructional settings. Deriving support from the behaviour modification model, teacher behaviour modification as a possibility and necessity came

under focus. Like Flanders, several others attempted to explain teacher behaviour in classroom/instructional situations and the possibility of refining it through feedback. A further conceptual extension in this direction has been regarding teaching skills as attributes that can be developed by practice in simulated situations, this has taken the form of 'micro-teaching'. The instructional process as seen on the basis of these developments has come to be seen as a 'design' which can be visualised by a teacher with fair certainty of its effectiveness. Considerable articulation and exploration on this aspect of various instructional designs and their implementation are available. These have brought into use concepts like instructional system, instructional strategy, instructional package, instructional modules, teaching models, etc. Similar, though not equally expansive, contributions have been made by the other schools of psychology, like the cognitive school and the humanistic schools. These have enhanced the understanding about the pedagogy to such an extent that, sometimes, the term 'pedagogic science' is used to denote them. In fact, the influence of psychology on education is so much that the British Psychological Society and Association of Teachers in Colleges and Departments of Education suggested in 1962 that if 'educational science' were to evolve its own language, it would very likely consist primarily of psychological terms. In fact, around the same time, in India also a similar trend developed especially after the establishment of the National Council of Educational Research and Training (NCERT) in 1961. In subsequent years, rather decades, this relationship between education and psychology has been seen more clearly and even now it has not altered materially.

Side by side with such developments in pedagogy surfaced the inadequacy of any one conception on aspects of the instructional pro-

cess be it teacher, learner, curriculum framing, curriculum transaction or performance assessment, for each of these operates not as mere presage variables but are live components of socio-psychological environment which affects these during and outside the instructional process. This expanded the purview of an educational explanation to include the social-political-economic-psychological milieu which provides a context for education. Thus, teaching in the classroom got linked with what obtained in the school environment, family and community at large. This perspective developed during the twentieth century broadened the view about teaching and also compelled one to see the processes through which a learner acquired knowledge, skills and other behavioural attributes, in larger contexts. This emphasised teaching-learning as the central process in education which had to be conceptualised, created and provided for with the help of several other influences emanating from social environment. Perforce education had to trespass its 'psychological' boundaries and draw upon from other disciplines especially sociology, political science, history, and social anthropology. Concepts from these disciplines had to be adopted and assimilated into education. Teacher preparation programmes, therefore, had to include in their substance inputs that would provide for the development of teaching skills to be practised in the teaching-learning situations with conscious efforts to relate them to the contexts in which specific tasks of the teacher had to be considered. This view, broadened the boundaries of education from teacher training programmes to wider limits within which they could be seen as constructs of wider pedagogical science. Explorations towards finding out varied bases of education and its processes, philosophical, psychological, sociological, political, economic etc., for creating educational processes which would be effective and

efficient for the purpose of educating the learners, operating these processes with needed institutional and other structural support, and appraising the processes and structures thus created continually in the societal context, become major concerns of the newly emerged form of education-pedagogical science.

The substantive dimension of education has expanded enormously as also its operational manifestation. Simultaneously, there has been an increasing need for providing education in some institutionalised form. The networking of institutions engaged in providing education of varied kinds has expanded and so has its personnel, they have got spread out over a much larger space, extending beyond the formal and nonformal educational institutions. This consciously created and operated 'influence fold' for changing (more appropriately, developing) individuals and social situations and society as a whole has become a part of 'social reality' which needs to be understood.

The large scale network of educational institutions has brought into focus certain issues and processes which do not fall into the strict purview of pedagogy.¹ These pertain to the administration and management of such a network of educational institutions, planning and financing, inter-linkages among different institutional structures and within the structures, and so on. This views education in a macro context within which pedagogic processes operate.

Of late, education has come to be seen as a programme, an input in the process of development. This newly acquired role enlarges the responsibility of education not only to describe the dynamics of its interactions with in the societal or developmental context but also to explain social reality with respect to education. This has brought it on par with other social sciences. The contribution of education

to agricultural, industrial, economic and other sectors of development has become more urgent. This aspect acquired visibility when the programme of education took the form of a mass movement. For instance, the work of the Literacy Mission towards universalisation of education, non-formal education and adult education programmes, family welfare programmes, health care and nutrition programmes and programmes in other sectors of development like agriculture, made the educational component in various development activities more clearly visible. This also has given rise to other relevant questions like proportion of the national income which ought to be invested in education, its allocation to different sectors of education — primary, secondary, higher, adult, scientific and technological. All this has led to the emergence of a new specific area of education called economics of education, making it more a sub-discipline or branch of education than of economics, given that considerations are of an educational nature. It is true also for other such branches or sub-disciplines like sociology of education, psychology of education, philosophy of education, etc. These sub-disciplines mainly adopt an interdisciplinary approach to educational processes. The synthesis of such study about educational processes and educational problems takes place to lead to an integrated understanding of education and its processes. In fragmented forms different aspects of knowledge belong to disciplines from which education draws upon.

The increasing understanding of the multiplicity of forces and variables acting upon the pedagogic aspects of education have expanded the substantive domain. Knowledge accumulated through academic and professional activities in education becomes a body of knowledge which is uniquely its own. This knowledge serves as a necessary basis when educa-

tion is taken as a development input or a variable to understand the process of social development. Such an understanding of educational processes as a social science finds fuller meaning when seen in an 'interdisciplinary' context as it acts along with many other processes, the understanding of which is the concern of other disciplines of social sciences. This has enhanced the knowledge component in education by bringing in aspects of interactions of education with the other social, political, economic functions and spheres in society. Broader, more comprehensive concepts have got included in educational terminology as well as diversified its methodology.

Further, the knowledge component in education has got differentiated enough. On surface the need for not only conceptualising on education as social action, but also theorising on its 'action' aspect. This entails providing an 'intellectual perspective' in which 'practice' is to be viewed, this perspective being derived from knowledge components which are outcomes of pursuits of knowing in educational situations. This essentially involves a theory of practice which is denoted by the term 'praxis'. The term praxis as a construct, will contain all that can be theorised about action based on components, such as 'scientific', 'humanistic', etc. Praxis can be scientific praxis, humanistic praxis, or any other praxis, depending upon the component of knowledge being utilised. Thus, education has emerged as a differentiated, diversified, substantive area. This disciplinary domain of education is very vast and varied, yet has a distinctness as reflected by its concepts.

In the process of diversification, the disciplinary understanding of education has changed considerably. Its original feature of being the concern confined to those engaged in teacher education at the school level or working in colleges of education and Departments of Education at universities as well

as its near singular dependence on psychology have changed resulting in not only a substantive expansion but also diversification of methodology. It has also acquired a distinct status among disciplinary persuasions. Its distinctness is in the nature of its substance. The distinct forms of knowledge in education may be recognised as follows:

(1) *Knowledge pertaining to educational phenomena in the form of explanation of the pedagogical and supportive aspects.* This is essentially academic and conceptual in nature. The academic pursuits are those which aim at the understanding of educational processes. The understanding of aspects of education in specific perspectives is an example of this. The outcomes of these pursuits provide an important basis for creating an educational practice or a process. Similarly, there are other pursuits which are made for the understanding of education from the points of view that are philosophical, historical, sociological, political, anthropological, or economic in nature. The outcomes of these pursuits are relevant for the comprehensive understanding of education and its processes.

All these serve as theoretical bases to grasp the nature of educational processes. However, a point needs to be appreciated in this context. These pursuits are, in nature, primarily of psychologists, sociologists, philosophers, political scientists, anthropologists, or economists. The knowledge generated through these pursuits is essential for the understanding of education and as such may appear to be part of knowledge in education. Yet it is so to the extent it is utilised in education for discourse in education and generation of knowledge in education. However, it needs to be recognised that the knowledge from all these pursuits which are similar to those in other disciplines, is further circumvented by considerations which are

educational in nature as discussed in earlier sections. Through the superimposition of these considerations, the knowledge gained, through various disciplinary pursuits, is further transformed. It is at this stage that the concepts and viewpoints which are originally psychological, sociological, historical and philosophical turn into educational concepts and viewpoints to represent 'newer knowledge'. The body of this newer knowledge is knowledge in education.

Further, the academic pursuits of psychologists, sociologists, philosophers, etc. which are relevant for academic pursuits in education are limited in scope. A psychologist may be interested in studying behaviour in general, in its wider scope; however, the pursuits by him that are relevant for generating knowledge in education are limited. In that sense, concerns of educational psychologists are rather limited in comparison to those of a psychologist. Similarly, the scope of the educational philosopher, educational sociologist, etc., is limited in comparison to that of a philosopher, sociologist, and so on. Yet, in another sense, the scope of educational pursuits based on initial pursuits — psychological, sociological, etc. — later become wider as they contain other considerations mentioned earlier, as their integral part. These distinctions may help in discerning the nature of disciplinary pursuits in education.

(2) *Knowledge pertaining to the ways in which knowledge in other disciplines could be rendered in to curricular forms and appropriate techniques for their transmission without losing sight of the perspectives and tenor of those disciplines.* This is different from the knowledge in pedagogic science. This involves a continuous effort at discerning the necessary variations both in curricular framework and their transactions in order to suit the subtleties of different disciplines of basic, applied and technical natures. There is more applied knowl-

edge in education. Examples of this are science education, arts education, mathematics education, language education, technical education, and so on, as areas of study.

(3) *Knowledge pertinent to personnel development in education*. This stretches much beyond the teacher education programmes of yester years, as, such programmes are required not only for pre-service personnel but also for in-service personnel. The inputs for such programmes are different as hinted at above. They constitute the 'technology' dimension of education.

(4) *The knowledge generated in education through academic pursuits are utilised for constructing educational practice and processes*. These are to be continuously evolved and made more responsive to the demands on education for individual development and social progress. These disciplinary concerns in education are largely pedagogic in nature. They require certain autonomy for devising, refining and perfecting the practices. All these represent the professional nature of disciplinary pursuits in education. They are carried out by professionals who need to exercise independence in decision-making about educational processes and carry out other professional tasks with professional ethics as the intrinsic motivation to render their behaviour normative.

Seen thus, education has its knowledge component quite well differentiated with the internal elements mutually contributing to knowledge generation. Apart from this the distinctness of education is also due to the composition of its personnel. For generation and implementation of the kinds of knowledge in education, its personnel require an orientation which is essentially multidisciplinary. That is they need to be equipped with necessary know-how of atleast two disciplines in order to be able to succeed as educational personnel. Knowledge of education, especially pedagogy,

which is the basic concern of the discipline is a must in order to recognise how curriculum can be visualised concretely and relevantly. Equally important is the knowledge of the discipline on which curriculum suitable for the particular course of study or programme is developed, level of the learners, objectives of the programme, etc. Without this the curricular choices made may not be effective. That is the task of rendering knowledge of pedagogy into teachable or practicable forms at various stages of education requires curriculum construction in sequenced forms with specification of appropriate instructional inputs for generating an effective teaching-learning process. Thus personnel in education are not only those who are actively engaged in pedagogic concerns of curriculum development, programming and monitoring educational activities but, also all those who are merely engaged in curricular transactions (teachers) in other disciplines as well as those engaged in personnel development in all fields. It also encompasses those who are associated with education not as 'practitioners' as stated above but are 'supportive' to them. This category includes administrators, planners, managers, financing agencies, advisers and educational critics. In short this domain of education is shared by all those concerned with the generation of knowledge, its communication and transmission. And of academic necessity, it has to be done by those who have specialised in these disciplines. However the main point to consider is whether this function has a common form and basis in terms of purpose and other relevant considerations to make it educational. The answer is undoubtedly in the affirmative.

The point has already been made that the disciplinary advancements in an applied practice-based area like education are supported by the actual practices. Some major field events show that there has in fact been a dialectical

relationship between field events and disciplinary developments. Sometimes, concern at the field level have been expressed about the need for conceptual articulations on education and for this, the need to encourage the study of education. In contrast, there have also been newer practices introduced in the field as a result of substantive and/or methodological breakthroughs in the study of education. These are reflected by the recommendations made at different times of the several committees and commissions, on both structural as well as substantive diversification with a definite consequence of disciplinary advancement. As early as 1926 the Sadler Commission recommended the establishment of the Departments of Education in the universities with professional positions so that the study of education could be extended beyond classroom based pedagogy. This resulted in the establishment of such Departments in some universities, adding to the structural dimension. However, till about the fifties of this century education remained primarily the concern of those who opted to be teachers at the school stage and those who were teacher educators at colleges of education. To this extent its substantive purview did not cross the pedagogic activity.

The post-war period saw vast changes take place in the disciplinary perspective of education. The study of education caught the attention of several academicians. This brought into focus aspects of education which until then had escaped systematic understanding. The administrative set up and practices, the enrolment and sustenance potential of educational institutions, especially at the elementary level, curriculum development and similar aspects brought to the fore the view of education as a macro system in itself. Such concerns also influenced the study and understanding of the pedagogic dimension in a better light. The substantive expansion of educational under-

standing has led to a better differentiation of the curricular programmes. In effect not only are continual efforts put forth to revamp teacher education programmes and diversify them but also programmes for more theoretical, academic study of education as well as education in the developmental context are put forth. Major curricular programmes available at present are listed in the Notes at the end of this article.² To further such concerns newer institutional arrangements are also made either to implement such programmes or to design and support them. The Academic Staff Colleges, the National Council of Teacher Education and the National Institute of Adult Education are but some examples of this. Even earlier establishment of the National Council of Educational Research and Training (NCERT), National Institute of Educational Planning and Administration (NIEPA), the University Grants Commission (UGC) and the State Institutes of Education which have henceforth been elevated as State Councils of Educational Research and Training (SCERTs) are intended to facilitate the study and practice of education more effectively. In fact viewing education in the larger societal context got highlighted when the Education Commission (1964-66) made a strong plea to break the isolation of education from other disciplines in the university stream on the one hand and social life on the other. It was to serve this broader purpose that the Education Commission (1964-66) recommended the establishment of schools of education in a few universities. For such a study of education interdisciplinary research was emphasised as an approach by the Education Commission (1964-66). This view was incorporated in the National Policy on Education (1968). Later one notices some attempts, especially at the research level, to view education in the broader context of societal development. This view got impetus when the Indian Council of Social

Science Research (ICSSR) sponsored specific research projects for the study of educational projects on a large scale.³ The establishment of the Zakir Husain Centre for Educational Studies at the Jawaharlal Nehru University was to serve a similar purpose at the levels of post-graduate teaching and research.⁴ Still later, many institutions of development studies supported by the ICSSR included in their research agenda the study of education as a significant factor for understanding social phenomena while also treating education as a development input.⁵ This has made education and its study in the societal context more widespread and visible. Besides, academicians from other disciplines cognate to education such as sociology, economics, political science, psychology, history, etc., started taking interest in the problems of education especially in the macro context. This relationship between education and social sciences is well articulated by Srinivas. Through this interest, educational processes came to be seen as an integral input in the larger social phenomena.

The above analysis brings out the fact that education as a discipline, draws and utilises knowledge from different disciplines. Its disciplinary significance finds meaning only when seen in relation to other disciplinary perspectives; nevertheless it remains identifiable and unique both in connotation and substance. Hence, it is essentially interdisciplinary in character. Its main concern is practice, service or action created within the societal context. The performance of such action is improved through independent practice which helps the practitioner or performer to sharpen the coordinated applications of knowledge of different disciplinary persuasions, and develop an integrated style to practice or perform. This has disciplinary identity in the sense that it belongs to a particular area and it has been created and performed in ways that are unique to it. Also,

practice or performance has the mark of the individual's style which speaks of the essence of involvement and participation in performance. This is true of all disciplines which have professional practice as central to them.

Disciplinary knowledge in education evolves both as 'theoretical constructs' and as 'praxis'. There is a parallel between the 'intellectual perspective' provided by praxis and theoretical constructs as used in the context of knowing with application of scientific method. Theoretical constructs are created by the scientist through his imagination, ingenuity, insight, spontaneity, etc. These constructs help in making explanations based on empirical observations adequate. Hence such constructs are called theoretical constructs. Similarly, praxis — humanistic, scientific, etc. — help in making relevant ground rules based on different knowledge components about educational situations/processes, for creating educational practice with effective procedural details for its operation. It is through this route that an effective link between research pursuits and educational practice can be established. Also, it is through such a link that a better understanding of 'practice' and ways to create and execute it can be found. These pursuits in educational research are of the highest order as they attempt theorisation about educational practice; theorisation is the goal of any academic and research endeavour. This scheme of research endeavour in education represents academic pursuits in education and demonstrates the distinctive form of education in its disciplinary shades.

Methods of KNOWING in Education

Education has acquired a substantive expanse distinctly recognisable as its own. Corresponding to this has been the evolution of a methodology of generating knowledge which is educational. This methodology has got diversified and differentiated along with the substan-

live expansion and diversification

The development of methodology in education bears similarity to the way it developed in the other social sciences. In fact even before organised effort was made to explore and understand education and explain its processes (which led to the emergence of pedagogical science) some articulation on education were made. These essentially pertained to the purpose of education. In these endeavours, queries related to the aims of education, substance of education, nature of man, educative ways to make individual a good person, image and role of the teacher to exert positive influence on the individual etc. philosophical and moral considerations were held supreme. However, the philosophical queries for this purpose related to select matters that were educational in nature. They were rather restricted in scope, which was determined by what was then considered educational. All these philosophical inquiries provided significant possibilities of what the goals of education could be and why but rendering them into practicable actions was beyond their scope. By this statement it is intended to point out that the far-reaching socio-political-economic changes that took place during the late nineteenth and early twentieth centuries created an urgency for creating knowledge that could have immediate practical relevance: explain the 'actual', and indicate how to mobilise and organise resources. It is here that the need for understanding what occurred as education, which factors operated and in what relationship and the like, came to the fore as pressing questions. In trying to find out explanations for these queries, education, like other social sciences resorted to adopting a time-tested methodology for generating knowledge — the scientific method. This necessarily brought in efforts to view educational phenomenon in terms of the typically hypothetico-deductive propositions to discern and define

relationship among the plethora of factors operating within the teaching-learning process — the learner attributes, teacher characteristics, process variables and learning outcomes. Empirical observations became the basis for any generalisation. Moreover, observations of the behaviour of variables under 'controlled conditions' were considered to be more precise and also reproducible elsewhere under similar given conditions. No doubt, a lot of valuable understanding about the teaching-learning process and the factors therein have been generated through such 'laboratory' type of studies, several specific relationships between and among variables have been explained — to name a few the efficiency of particular teaching methods vis-à-vis specific learner groups, levels and subject matter, factors affecting motivation of learners, personality attributes of learners and learner performance, and so on. However, their direct feasibility in practice remained suspect, primarily because the relationships among variables and their display under actual conditions are very complex. Similar was the experience with the several psycho-metric studies trying to measure and manipulate specific personality variables in learners, teachers and administrators. These studies were broadly of two kinds: one, large-scale surveys finding out the nature and levels of variable occurrences, in respect of several background factors such as, region, age, socioeconomic status, institutional and other affiliations, two, case study of particular individuals. The outcome of these studies was a rich fund of knowledge of a relational kind which provided an understanding of the significance of these variables for educational purposes. Variables in different combinations were studied both relationally as well as in terms of mutual impact. The methodology for such studies got diversified into several forms of surveys, experimental designs, each adopting a variety of sampling techniques, tools for

data collection and analyses. Remedies were found or at least attempted, to combat the significant methodological issues that emerged due to the complexity and flexibility in the operation of educational phenomena. Newer connotations to concepts and methods were evolved. For instance, 'case study' which was originally adopted from psychological methodology for study of 'pathological' cases in order to understand the psychological disorder and thereby find suitable remedy for it, was extended to the study of institutions with 'problems', this has further developed into in-depth, insightful study of distinct units — individual or institutional — not necessarily pathological, for discerning the unique behaviour or attributes and processes therein.

Despite such developments in the methodological dimension, the issue of field feasibility of the results of educational research persisted. The complexity of the real educational situation necessitated looking beyond the strict controls imposed by the methodology. This led to organising educational studies under real conditions with greater flexibility, less control and thus, lesser specificity and reproducibility, but with however, greater resemblance with 'educational reality'. However, in these studies also the methodological thrust remained on the 'scientific approach'. This has constituted a methodological breakthrough made especially in the field of education.

A further differentiation in methodology became necessary in order to understand education as part of the larger process of social development in which individuals participate. Such a 'participative' aspect of education needs to be studied not as 'extraneous' or 'controlled' as is done in laboratory situations. Instead participation of individuals in education and developmental processes, its nature, impact and issue involved can be relevantly understood only when it occurs 'naturally' in 'real',

uncontrolled situations. That is when the actual 'meanings' education holds for people, its impact, and the way the interactions of individuals and groups as well as of education and other social sub-systems occur, can be discerned. This participation is largely determined by motivational forces — feelings, preferences, motives, attitude, values, etc. — of the actors (participants). It is through the influence of these on the actors, that their actions and participation get shaped and exhibited. Thus, 'educational reality' in such a situation is not pre-structured 'out there', as assumed by positivists who use the scientific method, but it is evolved. The reality is evolved through the process by which 'actors' ascribe meanings to objects and situations and thus the educational situation itself is perceived and comprehended. For such an understanding, methods like participant observation, empathy, corroboration, meaning through interpretative science ethnographic techniques and interactionism are utilised. Phenomenological approach and hermeneutics emphasised these pursuits of knowing which are, of late, considered very relevant in education (Yadav, Roy & Lakshmi, Rama). These approaches represented another methodological view — ontologically and epistemologically. However, they capture certain characterisations of educational reality very aptly and generate knowledge about educational processes and their contribution. In fact, the relevance of these approaches can easily be seen in varied educational situations — viewing them as pedagogy or developmental inputs. On the whole, it can be said that education by its very nature continuously evolves. Research concerns too get differentiated and diversified. In the same way methodology of knowing in education has to evolve continuously and effectively to respond to the requirements of research concerns. Thus, the methodology of research in education, or for that matter in any

discipline should be seen not as rigidly defined but flexible to generate effective tools to enrich the field.

Approaches to knowledge generation originally developed elsewhere such as participant observation, ethnomethodology, hermeneutics, scientific method, have been adopted in educational research. Similarly tools and techniques from varied sciences, namely cybernetics, systems approach, interpretative techniques, corroboration, analysis, verifying, hypothesing, etc. are a pool available to educational research as they are to researchers in other disciplines. However, it must be recognised in this context that the use of these in educational research has to be decided in relation to the nature of educational substance and its amenability to chosen methodological approaches. It is such scrutiny with which the choice of method of knowing in education is exercised and then suitably adopted that renders uniqueness to the chosen methodology.

Concluding Remarks

Knowledge has grown in mammoth proportion and into well differentiated, diversified disciplinary forms. As a result disciplinary pursuits are no longer confined to abstract and theoretical formulations alone. Disciplinary diversification of knowledge, an inevitable consequence of penetrating scrutiny, has led to expansion of substantive contours of disciplines which, beyond a certain limit, has necessitated viewing phenomena/concepts from other disciplines. This has given rise to newer disciplinary pursuits with combined perspectives, especially academic pursuits, which were more consciously sought to be related to work and development needs due to social demands. Consequently several professional areas have gained prominence as disciplinary areas of study. These newer disciplinary pursuits not only pertain to development of new knowl-

edge in their combined per se but also have the responsibility of re-examining theories and processes under given conditions with a view to improvement to development. All technique-oriented disciplines such as agriculture, engineering, management and education, fall into this category. Nevertheless, even other disciplines such as social sciences, which have more theoretical and abstract content, are facing the increasing demand to face their agenda of academic pursuits like 'social action' and 'praxis' for generation of 'select substance' of concepts and understanding of concepts cognate to cognate disciplines. These principles are playing in theoretical contexts well known to those in the cognate disciplines. Knowledge comprises no 'standalone' of educational philosophy. Theoretical perspectives, but they are not input or raw data for educational substance for articulating these into educational substance. In other words, select substance of disciplines gets further transformed with help of normative and other constructs to appropriate practice. Attainment of this is the goal of education and such theories requires new constructs like 'function' into two kinds of stages of academic pursuits: partial to understand the nature of education and also the nature about it.

The perspective distinctive and practical reasons for penetrating scrutiny of the phenomena as knowledge expands with diversification of it is an outcome of penetrating scruti-

cation leads to expansion of substantive contours of a discipline and beyond a limit necessitates viewing the operation of several concepts from other disciplines. Such a combined perspective led to the emergence of newer disciplines. The process of combined perspectives further expanded its domain when academic pursuits were more consciously sought to be related to work and development needs due to social demands. This resulted in the prominence of professional areas acquired. Education, by its very nature, has to find its identity in this recently emerged category of areas of study. A few remarks may be relevant here to make our thinking clearer.

One disciplinary pursuit no longer confine themselves to abstract and theoretical formulations alone. They have to be taken further to respond to practices and processes under given social conditions with a view to improving them and contributing to development. This does not imply that only technological and practice-oriented disciplines like engineering, medicine, agriculture, management, social work and education fall in this category. Even for the disciplines from social sciences there has been an increasing demand to include in the agenda of academic pursuits of disciplines from social sciences concepts like 'social action'.

Two, the nature of academic pursuits combined with professional activities — practice-oriented programmes, social action, etc. — have necessitated the taking of a fresh look at theoretical knowledge which can explain programmes or actions better, and provide guidelines for their construction as well as execution.

Three, bringing to focus the study of educational concepts and theories *vis-à-vis* educational practice does not imply that specialised knowledge from cognate disciplines is to be de-emphasised. In fact, with greater diversification of substance in education there will be greater need for specialised knowledge from

cognate disciplines for developing appropriate concepts, practices, programmes and processes. What is important here is that the route of cognitive process through which it is to be accomplished needs to be more clearly understood through suitably designed academic pursuits. The outcomes of these will contribute to the main body of knowledge in education.

Four, academic pursuits are often described interdisciplinary in nature. It may be appropriate to label them interdisciplinary since knowledge from cognate disciplines is taken and utilised for developing educational concepts and utilising them for devising suitable practices. Yet, it may be clarified here that in pursuing studies in education it is to be endeavoured to sharpen the connotations of educational concepts, theorise about them as they get concretised through educational programmes, and thus seek disciplinary identity for education.

With increased diversification in the substance of education, the need for adopting multiple approaches to methodology of educational research increases. Also the theorisation at two stages as stated earlier within the substance of education calls for a more consciously exercised choice of methodology of research from amongst the available ones, wherever they be, and devising of new ones wherever required. It must be recognised that there is need to keep the methodology of educational research under continuous appraisal for which the criteria should be to assess its potential to effectively respond to answering the questions and concerns of interest in education.

The disciplinary pursuits in education have to be carried out in such a way that they are of academic respectability and provide proper defence to the practices and processes of education and at the same time be relevant to the considerations and characterisations of education. Obviously, such an endeavour to

seek disciplinary identity for education has far-ranging implication for curriculum formation, for the study of education, its transaction modalities and the organisation and promotion

of suitable research support. Each of these tasks presents serious academic and organisational challenges which need to be looked into seriously.

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NOTES

1. This view provides a basis to studying education as a social science. The 'influence fold' created through education, to bring about change in society becomes a part of the larger 'social action'. It has thus to be seen as an integral constituent of 'social reality'. The concepts of 'social reality' and 'social action' as explicated in 'Social Sciences and Social Realities', Indian Institute of Advanced Study, Simla, 1976. It provides an appropriate conceptualisation about 'educational action' for its understanding in a macro context in society.
2. Programmes of teacher education at various stages have got more diversified in terms of their purpose, scope and substance. A brief inventory given below illustrates this point.

For Elementary Stage Teachers

- one or two year certificate courses offered to those who pass Class XII
- B.Ed. (Elementary) at the Maulana Azad Centre for Elementary and Social Education of the University of Delhi, instituted in 1993.

For Secondary Stage Teachers

- B.Ed., one year pre-service course offered to graduates and postgraduates of different faculties.
- B.Ed. through the Directorates of Correspondence/distance education mainly for inservice teachers of slightly more than a year's duration.

- B.Sc.Ed., B.A.Ed., offered as integrated courses to those who pass Class XII at the Regional Institutes of Education, Ajmer, Bhopal, Bhubaneswar and Mysore. NCERT. The integration of content and methodology of teaching is sought through these courses

For Study of Education at Postgraduate Level

- M.Ed. as a post B.Ed. course
- M.Ed. (Elementary) at Regional Institute of Education, Bhopal
- M.Sc.Ed. at the Regional Institutes of Education for integrated studies, disciplinary substances of respective subject and pedagogy, for subjects like Chemistry, Botany and Mathematics

For Higher Education Stage

- the universities at Baroda, Calicut, Bombay, Madras started programmes of professional orientation to college and university teachers in the late seventies
- in 1987 the UGC established 48 Academic Staff Colleges to provide professional orientation to teachers at higher education stage; of these, 45 are functioning at present, they offer orientation and refresher courses.
- the Indira Gandhi National Open University (IGNOU) instituted a Diploma course for university and college teachers in 1992

For Inservice Teachers

Attempts are being made to institutionalise inservice programmes for teachers at various stages through:

- District Institutes of Education and Training (DIETs) at the district level for teachers of elementary schools
- Institutes of Advanced Studies in Education and upgraded Colleges of Education, for secondary school teachers.
- Institutions of higher education in different areas like engineering, agriculture and medicine have their own programmes and other continuing education programmes
- certain institutions like the Central Institute of English and Foreign Languages, Hyderabad and Kishore Bharti, Hoshangabad, have developed courses to orient inservice teachers in the teaching of English and Science at the school stage.

For Teachers of Special Categories

To prepare teachers for teaching children with various handicaps, viz., visual, mental, orthopedic, speech and hearing at the school stage, courses are offered by the National Institutions for these areas at Dehradun, Secunderabad, Calcutta and Bombay. The All India Institute of Speech and Hearing, Mysore, offers university level courses to understand these problems. A few universities and the RIEs have instituted special courses for teachers to equip them for teaching children with various handicaps at the school stage.

- 3 The ICSSR sponsored some research projects on significant educational problems which were sought to be studied with interfacing of knowledge from disciplines cognate to education. The convergence of different disciplinary perspectives on an educational problem led to a more comprehensive understanding of it. The project on education of the SCs and STs by the ICSSR is an example of such a project
- 4 The Zakir Husain Centre for Educational Studies was established in 1972 as a constituent of the School of Social Sciences at the Jawaharlal Nehru University, New Delhi. It was envisaged that the Centre would promote the study of educational problems in an interdisciplinary perspective with a macro focus
- 5 The ICSSR supports about 25 institutions of research in social sciences. Many of them study education in the context of the overall development process in India.

Job Satisfaction : Definition and Theories

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Job satisfaction is as hard to define as 'satisfaction' per se. This is because the very concept of satisfaction is highly subjective. Similarly, the phenomenon of 'job satisfaction' varies from subject to subject, individual to individual. In this article, Dr. Afsar Khan, who has completed his Ph.D. by the Marathwada University, Aurangabad, for his doctoral work on the subject, ventures into the jungle of definitions of job satisfaction and by the use of a uniquely discreet judgement, reaches the conclusion that definitions, in themselves, are not enough to define as volatile a subject as job satisfaction. He concludes that the recognition of the dialectical dichotomy of the 'expectations' and the 'environmental provisions' in regard to job satisfaction can provide a satisfactory tool for its analysis.

JOB SATISFACTION being an emotive-variable, has been defined in various ways.

In the opinion of Brayfield and Rothe,

Job satisfaction refers to how people feel about different jobs,

A more common and generally applicable definition of the term, however, is provided by Varoom who states,

Job satisfaction is the positive orientation of an individual towards the work role which he is presently occupying

Porter and Lawler are of the opinion,

Satisfaction is the extent to which rewards actually received meet or exceed the perceived equitable level of rewards. The greater the failure of actual rewards to meet or exceed perceived equitable rewards, the more dissatisfied a person is considered to be in a given situation

According to Ronan,

Satisfactions are expressed opinion concerning the job, the organisation, and variables related to job context,

Mumford states,

Job satisfaction can be defined in terms of the degree of 'fit' between organisational demands and individual needs, and that the employee's satisfaction with his job and the employers satisfaction with work performance will only be high when this fit is a good one

James Price offers a broader definition.

Satisfaction is the degree to which the members of a social system have a positive affective orientation toward membership in the system. Members who have a positive affective orientation are satisfied, whereas members who have a negative affective orientation are dissatisfied

Russel observes,

Job satisfaction is a function of the importance attached by the workers to the extent to which needs are generally met in the work situation relative to the way in which those workers have ordered their wants and expectations

Kalleberg, in his definition states

Job satisfaction refers to an overall affective orientation on the part of individuals toward work roles which they are presently occupying

In spite of all the above definitions, there exists no single situation which is potentially capable of giving the perfect form of satisfaction at all levels of basic needs

Hoppock in his definition states,

Job satisfaction depends upon the extent to which the job that we hold meets the needs that we feel it should meet. The degree of satisfaction is determined by the ratio between what we have and what we want

The degree of satisfaction always remains less than what we expect it to be. It never reaches 'the Cent Percent Must' which endorses

the principle: the more we have, the more we want

Hoppock further writes,

Satisfaction can result from a job which meets our needs today or from a job which promises to meet them in future

Describing job satisfaction, D E Super has presented a clear view.

Work satisfaction and life satisfactions depend upon the extent to which the individual finds adequate outlets for his abilities, interests, personality traits and values. They depend upon his establishment in a type of work, a work situation, and a way of life in which he can play the kind of role which his growth and exploratory experiences have led him to consider congenial and appropriate

Locke produces a comprehensive definition of job satisfaction as,

Job satisfaction results from the appraisal of one's job as attaining or allowing the attainment of one's important job values, providing these values are congruent with or help to fulfill one's basic needs. These needs are of two separable but interdependent types: bodily or physical needs and psychological needs, especially the need for growth. Growth is made possible mainly by the nature of the work itself.

Hackman defines job satisfaction more precisely,

Job satisfaction refers to a person's affective attitudes or orientation toward a job. It is one measure of the quality of life in organisations. There is an increasing acceptance of the view that material possessions and economic growth do not necessarily produce a high quality of life. Recognition is now being given to the importance of the kinds of affective reactions that people experience on the job

Webster's Dictionary defines job satis-

faction as the

Fulfillment of a need or want from a piece of work

Factors Affecting Job Satisfaction

Several explanations have been suggested to account for the variation in job satisfaction of workers. They are as under

- 1 Job characteristics
- 2 Individual characteristics
- 3 Organisational characteristics and
- 4 Individuals' meanings of the work-situations.

Among these one usually finds that the first two types of characteristics are frequent factors and have been studied and associated with job satisfaction

1 Job Characteristics

Herzberg in his Two Factor Theory, has identified one of the factors of job satisfaction as Job Content (intrinsic) and the other as Job Context (extrinsic). The factors associated with doing the job (content factor or intrinsic factor) include

- (a) The challenge and interest of the work.
- (b) Perception of the worth of the work
- (c) Participation in decision making or amount of responsibility and decision making power accompanying the job
- (d) Control/freedom of the job.

The second set of job characteristics has been identified as job context factors (extrinsic factors). These factors focus on the context in which a job is done and job features that are determined by external events or other people. The most common dimensions appear to be

- (a) Amount of payment.
- (b) Cohesion of a work group (integrated work group)

- (c) Style/type of supervision or leadership received.

2 Individual Characteristics (Demographic Variables)

These characteristics of job satisfaction are also known as personal characteristics, the most important of these being,

- (a) Occupational level
- (b) Age
- (c) Education
- (d) Sex

These factors/characteristics have been included in one or the other theories of job satisfaction which are discussed below

Theories

Theories of job satisfaction have been classified by Cambell et al (1970) into two categories, content theories and process theories. These theories on job satisfaction differ in their views on the factors that cause job satisfaction

(a) Content Theories

These theories view job satisfaction as the result of meeting the needs, values or expectations of an individual by the organisation.

Maslow's 'Needs Hierarchy Theory' (1943) is one of the First Needs theories. Maslow had postulated a hierarchy of needs. His theory states that there are five types of needs: (i) basic physiological needs, (ii) safety and security needs, (iii) belonging and social needs, (iv) esteem and status, and (v) self actualisation, or the need for the individual to become what he is capable of becoming. The first three needs are lower order needs and the fourth and the fifth are higher order needs. Maslow explains his theory as saying that it is true that man lives by bread alone, when there is no bread. But if he has plenty of bread, other and higher needs emerge and when these in turn are satisfied, newer and still higher needs emerge. In

the work environment this theory would suggest that only after the lower order needs have been satisfied will the employee seek satisfaction and achievement from the work itself. Work, according to Maslow's theory, is most likely to satisfy the lower needs and least likely to satisfy the higher needs.

A similar study by Porter (1961) supports Maslow's views. Porter had conducted a study of the managers of different firms using the questionnaire as a tool, and found that the largest number of managers (53%) reported deficiencies in the satisfaction of their need for self-actualisation and the smallest number (27%) reported deficiencies in the satisfaction of their physiological as well as safety needs.

The theory of Need received criticism because of the idea that there are always physical needs to be satisfied, and sometimes the satisfying of certain needs leads to a strengthening of those needs rather than the reverse of them.

Another content theory is Herzberg's Two-factor theory. Herzberg (1966) believes that the presence of certain motivators leads to satisfactions, while their absence does not lead to dissatisfaction. These factors (intrinsic factors) or motivators such as achievement, recognition and the intrinsic interest of the work itself match the higher levels of self-actualisation in Maslow's theory of needs. On the other hand, hygiene factors (extrinsic factors) such as pay, security and physical working conditions match the lower order needs in Maslow's theory. The inadequacy of hygiene factors leads to job dissatisfaction. Herzberg argues that hygiene factors such as working conditions are context factors, they are necessary conditions for job satisfaction but do not of themselves produce it.

Herzberg's theory assumes that the motivators contribute to the satisfaction and the hygiene factors contribute to dissatisfaction. This view has been criticised by some research-

ers. King (1970) and Gardner (1977), in contrast to Herzberg's theory, support the view that motivators contribute more to satisfaction than do hygies and vice versa for dissatisfaction. Other studies support the view that certain hygiene factors can contribute to job satisfaction. Those individuals who gain such satisfaction are regarded by Herzberg as unfortunates who have not reached the stage of personality development — the level of self actualisation needs. Those individuals are more interested in lower level needs such as pay, security and physical conditions. A hygiene seeker, according to Herzberg, is motivated in the direction of temporary satisfaction. It is clear this is not true all the time and there are individual differences in needs. The higher level of needs are not available for everyone, there is a limitation in opportunities for psychological growth on the job. These opportunities are confined to such few people that some people, therefore, seek only hygiene satisfaction from their jobs.

(b) Process Theories

These theories aim at describing the interaction between variables in their relationship to job satisfaction. Process theorists do not agree that satisfaction can be achieved simply by giving employees more of a variable that normally leads to satisfaction, such as more monetary benefits. These theories convey that there are individual differences which Herzberg's theory ignored and that these differences are very important to understand job satisfaction. Expectation and Equity Theory (Pritchard, Dunnette and Jorgenson, 1972) is one of these process theories. It views job satisfaction as the interaction between the individual's needs, expectations, values and what the job offers, which gives rise to satisfaction and dissatisfaction.

According to equity theory, if the individual regards his rewards as being equitable

compared to other people, he is satisfied and he is dissatisfied if he considers them inequitable. The dissatisfied individual may put less into his work, take more breaks and might decide to withdraw or change his expectations to fit the situation. Some theorists argue that this theory does not seem to be supported when the job exceeds expectations.

Equity theory predicts that dissatisfaction may also result from overpayment or over-reward. The issue in the case of equity theory is that the individual compares his inputs and outputs from a job with others before deciding whether or not he is equitably treated.

Another process theory of job satisfaction is Reference Group Theory (Hulin and Blood 1968). This theory considers the groups with whom the individual relates as an important factor in understanding job satisfaction. Klein and Maher (1966) found that college educated managers were less satisfied with their pay than non college educated managers. Explanation suggested that one of the reasons for this difference is that college educated managers have higher expectations of pay because of their education and hence they related their salary to different reference groups — that is, highly educated and highly paid group compared to those of non college educated managers who compared their salaries with other non college educated and lower paid individuals.

This theory had received some criticism because it does not predict, for instance, how individuals choose which reference group to relate themselves to. Individual personality is one influence on choosing a reference group, thus, expectations based on reference groups must be supplemented by a knowledge of personality.

The relationship between expectation and reality of the job is not always the sole determinant of satisfaction and dissatisfaction. Locke (1976) points out that expectations

which the individuals have, do not necessarily determine job satisfaction.

Locke was supported by the findings of Amaee (1978) in emphasising the importance of values rather than of expectations.

Some studies indicated that realistic expectations and information have positive effects on job satisfaction. Ambiguity may lead to dissatisfaction. Further, the role of expectations in job satisfaction is not the same in all situations. Changes in expectations may or may not lead to changes in job satisfaction. The value in a job may affect the satisfaction of individuals. This is the core of the **needs value fulfilment** theories. Kuhlén (1963) found that male teachers wanted far more from their jobs in terms of achievement than the female teachers did. The discrepancy between what men wanted from the job and what they actually received from it was related more to overall job satisfaction than was the discrepancy for women, for whom the job was not such an important aspect of life satisfaction.

Varoom (1964) argued that job satisfaction is negatively related to the degree of discrepancy between what the individual needs and what the job offers of the fulfilment of these needs. Taking into account all types of needs, the greater the total discrepancy, the less the satisfaction; the greater the congruence, the greater the satisfaction.

This theory has been criticised because it ignores the importance of a particular need. It does not answer what the more important needs are to individuals. It also ignores the value of the need. As Locke points out, people may be influenced by the discrepancy between what they want and what the job offers. Therefore, we have to distinguish between the amount of value wanted and how much a person wants of such value.

These theories and studies of job satisfaction have been criticised because each theory deals with some aspects of job satisfaction and

ignores others. They do not consider the importance of change in the course of the individual job. Some, such as the theory of Herzberg, ignore the importance of individual differences.

The Expectation Theory relates to when the job does not come up to the expectations, but is unclear on what will happen when the job exceeds expectations.

Some theories such as the Reference Group Theory do not sufficiently explain its generalisation. This theory does not explain why some people choose one reference group whereas other people of the similar category choose another.

It seems that none of these theories is perfect. Each one has its limitations. Therefore, when we deal with the phenomenon of job satisfaction (dependent variable), we should always consider the various independent variables of the situation. Job satisfaction involves a dynamic interaction between the **Individual**

and the **Environment**. The key word 'environment' here means that we are considering the relative importance of different aspects of job satisfaction such as organisational structure, training, age, education, prestige, geographical factors, promotion, social-interaction, personnel, salary, number of years on the job, supervision, recognition, and security. It is only by accepting these necessary environmental provisions, that we can surpass the limitations of the definitions of job satisfaction.

Achievement of complete satisfaction, however, may be both impossible and undesirable, yet it is possible and probable to understand it in its varying degrees. Moreover, we should also avoid dealing with one theory in all situations and avoid dealing with all theories in one situation. Definitions, here, do not seem to be as important as the factors governing them. They are merely a result of the gaps between various theories.

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(See Rule 8)

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Instructional Media Used by History Teachers

V K RAINA

Reader

National Council of Educational Research
and Training, New Delhi

An attempt has been made in this study to find out the various types of instructional media being used by history teachers in the teaching-learning of history. Significantly, it has been found that it is the blackboard and the textbooks alone which are used 'frequently' by the teachers. Charts, pictures and maps are the 'occasionally' used visual aids. Interestingly, visual aids such as slides, films, radio, television and source-material which have relevance and appeal to the teaching of history, are 'never used'. The major reasons for not making use of the various audio-visual aids is their non-availability, lack of financial support, administrative apathy and lack of motivation and adequate training of the teachers.

THERE is a general belief that most of the secondary school history teaching in India is carried out in rather uninspiring surroundings. Supporting such a belief, although in a different setting, Garvey and Krug (1977) observed that

the traditionally rectangular classroom often communicates to pupils and teachers alike an atmosphere of carbohic and confinement. One of the greatest problems of the teacher of history is to overcome this atmosphere, to use the classroom in the reconstruction of the drama of the past, to people it imaginatively with characters who now

exist only in record, and to help the prisoners of the classroom — the children — develop a sense of the past out of what they can see sometimes in the dismal present.

It was, perhaps the historian, Sir Lewis Namier, who remarked that the subject matter of history is human affairs, men in action, things which have happened and how they happened, concrete events fixed in time and place and their grounding in the thoughts and feelings of men. In order to portray all this, a historian tries to reconstruct imaginatively the concrete events grounded in another period.

and another society, he tries to create a picture of the event (using pictorial imagination) or he tries to summon up feelings and thoughts surrounding the event (using sympathetic imagination)

The use of instructional media, or to use the traditional terminology, audio-visual materials play a significant part in firstly, making the classroom atmosphere lively and, secondly, in helping the learners to visualise a historical phenomenon which may have taken place many centuries ago. The past which is shrouded in dim obscurity is difficult to reconstruct and even the best of history teachers may not be able to represent it realistically by verbal descriptions. The use of such resources helps to kindle the curiosity of the learners, and to build the right mental pictures, which lead to the proper visualisation of the past in its true perspective, with all the colours and details.

Motivated by these considerations an attempt has been made in this study to know the different instructional media being used by a group of teachers in teaching history.

Method

A detailed questionnaire on the various aspects of history teaching in the state of Rajasthan developed by the author was sent to 481 Higher Secondary Schools in the year 1990-91. Out of these a total number of 239 teachers responded and returned the questionnaire duly filled in.

Out of the 239 teachers who responded and returned the questionnaire duly filled in, 189 were from the Government Schools and 50 were from private schools constituting 79 per cent and 21 per cent respectively of the total sample. The total number of urban, semi-urban and rural school teachers who responded was 98, 63 and 78, which constituted 41, 26 and 33 per cent of the sample.

Tool

A comprehensive questionnaire relating to various aspects of history teaching in Rajasthan was developed by the author. Most of the information in the questionnaire was collected by making use of a scale to evaluate the amount of agreement or disagreement.

Results and Discussion

Table 1 provides the information regarding the different instructional media being used by the teachers 'frequently', 'occasionally' and 'never'.

TABLE 1
Instructional Media Used by History Teachers

<i>Instructional Media</i>	<i>Frequently</i>	<i>Occasionally</i>	<i>Never</i>
Blackboard	205	34	-
Maps	102	135	02
Charts	43	169	27
Pictures	28	158	53
Source material	16	108	115
Slides, films and cassettes	10	26	212
Radio	-	42	197
Television	07	48	184
Textbooks	162	70	07
Reference books/material	86	131	22
Material for talented learners	54	134	51
Material for slow learners	54	111	74

A study of the above table shows that the use of the blackboard has been reported by 205 teachers or 86 per cent of the total sample, as being used frequently, followed by 34 teachers or 16 per cent who make use of this occasionally. No teacher has reported that he does not make use of a blackboard. About the use of maps, 102 teachers or 43 per cent of the sample

use it frequently, followed by 135 teachers or 57 per cent of the sample who make use of it occasionally and two teachers or less than one per cent who never use a map. The frequent use of charts has been reported by 18 per cent teachers, followed by 71 per cent teachers who make only occasional use of these and 27 teachers or 11 per cent who have never made use of charts in their teaching.

Only 16 teachers or approximately seven per cent make use of source material such as coins, archaeological finds, documents, newspapers, etc. Occasional use of such material is made by 108 teachers or 45 per cent of the sample, followed by a large number of 115 or 48 per cent of the total sample who have never made use of source material in their history teaching. Only one teacher out of the sample 139 teachers has reported making use of slides, films and cassettes in his teaching. This is followed by a small number of 26 teachers or 11 per cent of the sample who make occasional use of this device, followed by 212 or 89 per cent of the teachers who never use slides, films and cassettes, etc. in their teaching. No teacher has reported the use of the radio in his teaching. Only 48 teachers or 20 per cent of the sample teachers make occasional use of the radio, followed by 197 or 82 per cent of the sample who have never made use of the radio in their history teaching. Comparatively, television is being used by a greater number of teachers. Seven teachers or approximately three per cent make frequent use of the television, followed by 48 or 20 per cent of the teachers who make occasional use of it and 77 per cent who have never used this device in their teaching.

Textbooks and other written material have been put to greater use by the teachers in their teaching. As was expected, a large number — 162 teachers or 68 per cent of the sample — has made frequent use of textbooks, fol-

lowed by 70 or 29 per cent of the sample who make occasional use of textbooks and only seven or approximately three per cent who never make use of a textbook in their history teaching. Reference books and other reference material is being used frequently by 86 teachers or 36 per cent followed by 131 or 55 per cent who make occasional use of it and 22 teachers or nine per cent who have never used reference material in their teaching. Frequent use of enriched material for the talented students has been reported by 54 teachers or approximately 23 per cent of the sample, followed by 134 teachers or 56 per cent who report its occasional use and 51 teachers or 21 per cent who never use it. Remedial material for slow learners is frequently used by 54 teachers or approximately 23 per cent of the sample, followed by 111 teachers or 46 per cent who make occasional use of it and 74 teachers or 31 per cent who never use such material in their classroom teaching.

Table 2 provides information regarding the frequently used media by the history teachers in order of ranking.

TABLE 2
Rank-order Position of 'Frequently' Used Media

<i>Instructional Media</i>	<i>No of Teachers Using</i>
Blackboard	205
Textbook	162
Map	102
Reference books/material	86
Material for talented learners	54
Material for slow learners	54
Charts	43
Pictures	28
Source materials	16
Television	07
Slides, films and cassettes	01
Radio	

A perusal of the above table clearly shows that the three frequently used media in the order of their ranking are, blackboard, textbooks and maps. Again, there is a big gap between the use of the blackboard and the textbook, on the one hand, and the use of the map, on the other. Use of important media such as charts, pictures, source material and television ranges from a low 18 per cent to merely three per cent of the teacher users. There are practically no users for media such as slides, films, cassettes and radio. One need not provide an explanation for the obvious predominant use of the blackboard, textbook and map by this group of teachers. However, the reasons for the non-use of other important media would be discussed under a separate head.

Table 3 provides information about 'occasionally' used media in the order of their ranking by this group of teachers.

TABLE 3

Rank-order Position of 'Occasionally' Used Media

<i>Instructional Media</i>	<i>No of Teachers Using</i>
Charts	169
Pictures	158
Maps	135
Material for talented learners	134
Reference books/material	131
Material for slow learners	111
Source material	108
Textbook	70
Television	48
Radio	42
Blackboard	34
Slides, films and cassettes	26

The above Table provides information about the 'occasionally' used different instructional media. Considering that it is only occa-

sional use to which these different media are being put they cannot be expected to make much impact. Use of devices such as charts, pictures and maps, which is only occasional by this group of teachers must be regular and frequent. These devices, by way of cost or availability, are not very difficult to procure, but the reasons why they are still not being used would be discussed separately.

There are some instructional media which the teachers of this study reported they had never used. Table 4 provides information in rank order form about the 'never used' instructional media.

TABLE 4

Rank-order Position of 'Never Used' Instructional Media

<i>Instructional Media</i>	<i>No of Teachers</i>
Slides, films and cassettes	212
Radio	197
Television	184
Source material	115
Material for slow learners	74
Pictures	53
Material for talented learners	51
Charts	27
Reference books/materials	22
Textbooks	07
Maps	02
Blackboard	-

One fact that emerges very clearly from the study of the above table is the poor use, almost non-use, of important audio-visual media such as slides, films, cassettes, radios and television. These media help to provide 'vicarious' or 'substitute' experiences in place of first-hand experiences. In terms of learning, there is almost total agreement amongst psychologists that experiences such as these have much greater impact than the 'symbolic' experiences which are provided through only listening (narration).

and reading (textbook) History teaching becomes lively, interesting and meaningful by the use of audio-visual media such as slides, films, radio and television which, unfortunately, this group of teachers has reported that they had almost never made use of.

One may be interested to know the reasons why this group of teachers has not made use of different audio-visual materials

Reasons for Not Making Use of Different Instructional Media

An attempt was made in this study to know the different types of instructional media that this group of history teachers were using in their teaching. Along with this, an attempt was also made to know the important reasons from the teachers for not making use of different instructional media. The questionnaire that was sent to the teachers for filling up had a set of reasons for the non-use of such media, and the teachers were required to put a tick mark against the reason with which they agreed.

Table 5 provides information about the various reasons which this group of teachers have reported for not using different instructional media.

TABLE 5

Reasons for Not Making Use of Different Instructional Media

<i>Reasons</i>	<i>Teachers in Agreement</i>
Non-availability of different audio-visual aids/materials	187
Lack of financial and other resources for different media	187
Lack of administrative support	107
Lack of pre- and in-service training in the use of different aids and material	105
Lack of motivation amongst the teachers	44

The above table clearly shows that the

single important reason for not making use of different instructional media, as one would expect, is the non-availability of different audio-visual aids/material and almost total lack of financial and other resources for the purchase, etc. of such material. It may be added that the use or non-use of such material is crucial to the attainment of the objectives of history teaching.

A detailed discussion with some respondent teachers of this study supported the above reason for not making use of different media. Most of them stated that in the name of 'instructional media' virtually nothing existed in the schools. Some of the teachers informed that the schools had no budgetary provisions for this purpose. A few schools (government ones) reported that a meagre sum of Rs 25 (less than a dollar) was earmarked for the purchase of maps, etc. Some schools which the present investigator visited, had nothing in the name of audio-visual materials. The school library had no standard books or reference material relating to the teaching of history. A few schools that had a comparatively good library, suffered from lack of personnel and resources to use it. Shukla (1974), in a broader context, has observed about a similar situation that

Schools, like homes, have few books for the children. In quite a few schools, the books are protected jealously from the young readers who are likely to spoil them. In the absence of a librarian, the books may not be issued to children.

The other important reason why the teachers of this study are not making use of different instructional media is the apathy of the school administration towards the use of instructional media by the teachers. Many a time, the main worry of the school administrators — principals or headmasters — is the safe custody of such material rather than its adequate use. Such an observation was also made by some teachers of this study with whom this investigator had an

opportunity to talk. The main concern of the principals and headmasters is the proper annual checking and entry of such material in the stock-register for which they are accountable to the 'Department'. In such a situation, whatever little material such as maps, charts and globes, is available in the school, gathers dust in the school almshouses. An almost similar experience in the use of science equipment was reported a long time ago by Vaidya and Chaturvedi (1968) while making a survey of physics teaching in Rajasthan. This seems to be a general tendency of school administrators rather than specifically of this group of history teachers.

A good number of teachers (about 44 per cent) point out the lack of pre- and in-service teacher training in the use of different aids and materials as one of the reasons for the non-use of such aids. Pre-service teaching of the short duration of just twenty days barely provides an opportunity to the prospective teachers to learn to use different instructional media. Pre-service teacher training in India, by and large, is a ritual (Raina, 1982). It does not develop proper teaching competencies in the prospective teachers. The in-service training programmes are held more to complete a formality rather than to develop adequate skills amongst the teachers. It seems the teachers of this study are, to a great extent, justified in making or citing this as a reason for not making proper use of different instructional media.

A small number of teachers (about 18 per cent) feel that lack of motivation among the teachers is the reason for not making use of different instructional media. Perhaps, they may be of the view that they are operating in a system which does not take much cognizance of whether one is teaching with the help of different instructional media or without them, as long as the sole criterion of evaluating a teacher's performance is in terms of 'student mark'. It may be further pointed out here that 'student mark' may not necessarily be an index of the development of 'historical ability' in the learners. The progress/promotion of a teacher depends mainly on the basis of the number of distinctions, first divisions and the like attained by his students and thereby the teachers resort to a teaching methodology which is best suited to this goal, and the use of a variety of instructional media may not be an integral component of such a methodology.

The findings of this study are in tune with the popular perception that the instructional media that the teachers in our setting have easy access to are the blackboard and the textbook. The experiences emanating from the use of such devices would essentially be only of a 'symbolic' nature, and would not have much impact. The reasons for not making use of different instructional media are again either total non-availability of such material or no provision for the financial and other resource for the purchase of such material.

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Samanvaya Ashram : An Innovative Experiment in Education

S K BATRA

Reader

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and Training, New Delhi

A number of voluntary organisations spread out all over the country have been experimenting with a variety of approaches to educating that section of the society which could not be reached through the formal system of education and training. Samanvaya Ashram, as described in the following pages, presents a new insight into the society-education interaction.

SAMANVAYA ASHRAM literally means an ashram, i.e. a living centre, dedicated to *samanvaya* i.e. understanding, reconciliation, concord and harmony adjustment and assimilation, synthesis and integration. It implies an earnest and dynamic endeavour by all creeds and cultures to translate the same into practice by congregational contemplation and missionary co-existence through productive physical labour and identification with the people on the basis of truthful and non-violent means. This Ashram came into existence in September, 1954, when Vinoba Bhave entrusted the responsibility of the Ashram (then a mere three-acre plot of wild and repelling land donated by the Mahanth of Shankar Math) to Shri Dwarka Sundrani, his

close confidant and energetic manager of his Paramdham Ashram at Pawnar, now known as Brahma Vidya Mandir. Shri Dwarka Sundrani is the recipient of the Jamna Bajaj Award for 1991. At present he is the managing trustee of the Samanvaya Ashram and the moving spirit behind it and all its activities. He decided to concentrate on the child and explore his evolution and growth as a positive programme of the Samanvaya Ashram. Dwarkaji followed the three-word formula of Vinobaji, i.e. Yoga, Udyog, Sahyog. It means working for a balanced and simultaneous development of all the faculties of the child, viz., physical, religious and spiritual, by means of Udyog or productive physical labour leading to self reli-

ance in basic necessities, and through the process of Sahyog or correlation with life marked by open mindedness and the scientific approach, eternal vigilance and ceaseless striving, self-discipline and submission of self interest to the common good. It is a humble endeavour to help children with life, through life and for life. Calling it a non-formal system or alternative education, Dwarkaji has concentrated on three essentials

- (i) action-oriented research
- (ii) training of teachers
- (iii) production of teaching material

He has developed an ingenious method of teaching the Hindi alphabet to three- or four-year-olds through rhymes, drawings and games. Likewise, he teaches numerals through songs and play. He has authored and compiled an amazing collection of stories and songs, which are yet to be published. It will make Hindi-learning attractive and easy for children.

The Vidyapeeth in the Ashram has achieved commendable results in the domain of clear pronunciation, beautiful handwriting and proficiency in the Hindi language. Success in mathematics is not as conspicuous, but efforts are on to achieve this.

There is a residential school for girls in the Ashram itself and for boys at Samanvaya Vidyapeeth in Bagaha. The Vidyapeeth is running 150 schools spread over 83 villages with 4000 boys and girls. Several youths have shown remarkable aptitude in dairy farming, mechanics, electric motor winding and tractor driving. Girls are serving as teachers both in Ashram schools and outside. Some have learnt tailoring and are earning substantially which they could never have dreamt of in their Musahar homes. The students of Samanvaya Vidyapeeth are doing very well in life and are full of confidence about their bright future. The education departments of both the State and Central Government have expressed admiration at

the performance of the Vidyapeeth. The Central Government has set up a District Resource Unit at the Vidyapeeth. Many supervisors' training camps have been held. The National Council of Educational Research and Training (NCERT) has recognised the Samanvaya Vidyapeeth as a field station for action research. It has held 10 workshops at Bagaha during the last three years.

Education of the Musahars

The Musahar community in Bihar is the most backward one among the Harijans. Its members mainly live on manual labour. They are unskilled labourers. They do not make enough money to feed their children. Child labour is also very common among them. For generations they have been in the slave labour system, hence they have nothing to call their own. Their population in Bihar is about three million. The community is nearly cent per cent below the poverty line. They are quite ignorant of their rights. Among themselves, they fight on the slightest pretext.

Even to this day, some of the Musaharas are found eating carrion, rats, snails and dead animals. In fact, their extreme poverty is due to centuries of economic impoverishment. They have also been sexually exploited by the zamindars and mahants. Even today the average income of a Musahar family is hardly a hundred rupees. They live in very small huts made of bamboos and leaves covered with straw, which barely protect them against the elements.

Several measures and steps have been taken by the Government and various institutions for the upliftment of the oppressed and the down-trodden. The Samanvaya Ashram is one such institution which extends cooperation to create an atmosphere of comfort, at least in one corner of Bihar. The Ashram has distributed five thousand acres of land to three

thousand Musahar families for their livelihood. All required equipment and accessories such as bullocks, seeds, fertilisers and irrigation facilities were provided to them. But the result was not encouraging. Their poverty and ignorance were the two major obstacles which hampered their progress.

Despite the Government's grant of special facilities such as clothes, scholarship, free books, etc. to the Harijan children, the progress in the Musahar community is almost nil. The Musahar community takes little interest in sending its children to school. According to a survey, two per cent of Musahar boys go to school at the primary stage whereas in the case of girls the percentage is zero. One of the major reasons for the higher percentage of drop out among these children is their poverty. Most of the Musahar children graze goats, pigs, cows and do menial jobs at their masters' houses. Some children look after the younger children of their families, when their parents go out to earn their livelihood. This is their daily schedule. Hence it was felt that unless a change was brought about in their life style without affecting their daily schedule, educating them was impossible. Hence Samanvaya Ashram made an effort to educate Musahar children at its Centre. Children were asked to come to the Centre after dinner. They were taught at night. They slept in the hostel and got up at 4 in the morning. After prayers they again attended the classes and at sunrise they went back to their homes. But this effort could provide very little benefit to the children, because they spent most of the time out of school and were under the constant influence of their community.

So, the Samanvaya Ashram started a school, Samanvaya Vidyapeeth, at Bagaha in Mohanpur Block in Gaya District. It has a farm of about 50 acres of *Bhoodan* land. In the first experiment, 100 children — two children per village from 50 villages — were taken. In this

school, education was correlated with agriculture, dairy farming and mechanics for boys and cooking and sewing for girls. After a decade, a change was introduced in the experiment, because it was felt that two children could not create substantial influence in the community. So it was decided to take all the Harijan children who could be their students in 15 villages. At present 800 children are getting education in eight schools, all run by the Samanvaya Ashram. Recent survey reports have shown that 65 per cent children of the community in these villages are educated.

In this poverty-stricken community their bad health is also another factor, which makes them incapable of grasping anything and responding positively. The Ashram provides milk to small children and pregnant women.

Prayer has been correlated with education. The students get up at 4 in the morning and after their ablutions come to prayer. In the beginning they recite songs in their own dialect, Magahi. Gradually they learn to sing in Hindi. Emphasis is laid on correct pronunciation. They try to memorise the songs. They sing for hours. They are taught geography, history, moral lessons through these songs.

These children live together. They do their washings, cleaning and cooking themselves. For example, while making *chappatis* the girls have a slate and pencil with them. They calculate the number of persons, who are expected to eat. If a person eats 100 grams of *chappatis* and there are 200 persons expected to eat, they calculate the requirement on the slate and convert grams into kilos. They will then weigh the flour and add water to it to make the dough. They now know the weight of the dough. They are told to make equal pieces of the dough to make the *chappatis*. When the *chappatis* are ready, they count the *chappatis* and weigh them. They find that the weight has reduced, so they are taught that due to baking

water has evaporated and the weight has lessened. In this way arithmetic and science are taught.

The children are made to work in the farm. As their parents are generally agricultural labourers, they are given education through agricultural work, dairy-farming and mechanics. In mechanics they learn electric motor winding, diesel engine and irrigation pump repair and tractor driving. The girls learn cooking, sewing and kindergarten teaching. Shri Dwarka Sundrani wanted the girls to be trained as nurses, but did not succeed, because the tradition of child marriage exists in this community. The Ashram gives the students an opportunity to learn upto the age of 19-20 years, by keeping them in their schools. They have no examination system and have two objectives before them. The students must de-

velop the ability to earn and learn.

The Ashram has started extension work under the guidance of NCERT. It has established 100 centres of Non-Formal Education in 55 villages. All the children from 6-11 years of age from these villages are brought to these centres. Children are taught how to disinfect wells and clean drinking water. It was reported that every child has planted three papaya trees, five pumpkin plants and 250 grams of *arhar* seeds. After the rainy season every child will sow spinach seeds in the kitchen garden. The Ashram meets their expenses through the sale of these agricultural outputs.

Thus, the Ashram is serving the cause of educating the underprivileged and the down-trodden in a spirit of dedication which can only be experienced. It cannot really be described in words.

Teachers' Service Conditions and Training in Kerala

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The paper highlights the policy of the State of Kerala with regard to primary school teachers. Findings of the study indicate that the number of women in the teaching work force in the State is quite high. The requirement for teachers is declining every year in the State and an imbalance in the supply and demand of teachers is observed. The State does not provide work rewards to teachers to sustain their motivation for improved performance. Facilities for in-service education of teachers are inadequate. Upgradation of knowledge in school subjects, methods of teaching, playway techniques and preparation and use of improved teaching aids are the areas in which teachers need training.

A NUMBER of studies have reported low learning achievement of children in primary grades (Shukla and Garg, 1991; Govinda and Verghese, 1991; Bashir and Ramakrishnan, 1993; Jangira *et al.*, 1994; Verghese 1994). The study recently conducted by Verghese (1994) in Kerala *inter alia* revealed that nearly two-thirds of Class IV pupils in Mallapuram district and about 50 per cent in Kasargod and Wayanad districts could

not achieve 40 per cent in mathematics. The percentage of students attaining mastery level (80 per cent and above) in mathematics was abysmally poor (0.2 per cent to 0.6 per cent). The performance of Class II pupils in mathematics was also not encouraging. The situation is quite depressing.

This situation of declining school quality raises a number of questions. Are primary

school teachers adequately qualified? Are service conditions conducive to sustain their motivation? Is the initial education and training effective? Are teachers being provided in-service training to improve upon their performance? Is in-service training need-based? What are their training needs? These questions in respect of the State of Kerala guided the objectives of this study.

Objectives

The specific objectives of the study were to

- study State policy with regard to teacher recruitment, service conditions and their supply and demand,
- determine teachers' perceptions about their initial in-service training,
- determine the in-service training needs,
- identify factors which increase teachers' willingness to participate in in-service training programmes

Methodology

The study was conducted at two levels. At the first level, State documents, office orders, and other guidelines regarding teachers' recruitment, service conditions, supply and demand were studied. At the second level, a field study was conducted to determine the teachers' perceptions regarding their initial training and in-service training needs.

Sample

Two districts namely Wayanad (a tribal district) and Mallapuram were selected purposively. One block in each district was selected at random at the rural level. In the selected block, one secondary school was selected at random. Teachers of primary schools in the catchment area of the selected secondary school constituted the sample. In the urban area (the district headquarters), one secondary school was selected at random. Primary school teach-

ers in the catchment area of the secondary school were selected. The sample was restricted to 100 teachers, distributed across rural and urban areas as per the proportion of rural and urban population in the 1991 Census.

TABLE 1
Blocks and Teachers Covered

District	Block	Teachers Covered		
		Rural	Urban	Total
Wayanad	Mananthavadi	97	03	100
Mallapuram	Kuttippuram	91	09	100

Tools

The following tools were developed.

1. State Policy on Teacher Training Guidelines

It was developed to seek information regarding policy on teacher recruitment procedure, service conditions and demands and supply of teachers, etc.

2. Teacher Schedule

It was developed to determine teachers' perceptions regarding their initial training. Teachers' participation in in-service training programmes and their training needs were also assessed.

Findings

The findings relating to the State government policy of teacher recruitment, teachers' supply and demand, service conditions, etc. are presented first. These are followed by teachers' perceptions about initial and in-service training programmes.

1. Teacher Recruitment

The State has laid down 10 years of schooling as the minimum academic accomplishment with two years of certificate in teacher training (TTC) for appointment as a primary school

teacher The agency to recruit teachers for government schools is the State Public Service Commission and for private aided schools, it is the concerned management

Teachers for government schools are selected by the State Public Service Commission on the basis of the candidates' performance in a written test and interview. The appointment are made on the basis of merit and with due reservation to SC/STs and OBCs. SC/ST candidates are exempted from having professional qualification, in case sufficient number of trained candidates are not available to fill in the quota allotted or reserved to each of the community These untrained teachers are subsequently deputed for training with full pay and allowances

There are about six per cent language teachers (Arabic and Urdu teachers) who are not even matriculates The percentage of untrained teachers is, however, very low (2.5) in the State

2 Teacher Supply and Demand

There are at present 101 primary/elementary teacher training institutes in the State Of these, 14 are District Institutes of Education and Training (DIETs) and 87 Teacher Training Institutes (TTIs) Out of 87 TTIs, 64 Institutions are private aided.

The annual intake capacity of these primary teacher training institutes was 4080 till 1991-92, but from 1992-93 it has been increased to about 4200 Table 2 shows the enrolment of student teachers and the number of teachers turned out by these institutions during 1991-92

and 1992-93

The number of primary school teachers appointed during 1991-92 and 1992-93 are given in Table 3. These figures do not include teachers appointed in unaided, unrecognised primary schools

TABLE 3

Number of Primary School Teachers Appointed During 1991-92 and 1992-93

Year	Number of Teachers Appointed		
	Male	Female	Total
1991-92	468	939	1407
1992-93	536	984	1520

Table 3 manifests that about 1500 teachers are only required every year. The projected requirement of primary school teachers for the coming two years 1995-96 and 1996-97 is around 1400 and 1300 respectively. The data reflects that the turn-out of teachers is more than double of the requirement Further, the requirement is dwindling every year due to a dramatic fall in the population growth rate in the State.

The oversupply of teachers is a matter of deep concern. It is not very easy to reduce the supply It may take some time to turn off the 'tap' of teacher output once it has been turned 'on'. This is because it involves reduction in intake capacity and consequent dispensing with the services of surplus staff members Alternatively there is a need to transform some of the TTIs into in-service training centres for primary school teachers

TABLE 2

Teachers Turned Out by TTIs Including DIETs during 1991-92 and 1992-93

Year	Teachers					
	Enrolled			Turned out		
	Male	Female	Total	Male	Female	Total
1991-92	968	2920	3888	918	2695	3613
1992-93	986	2934	3920	925	2586	3511

3 Women's Share in the Teaching Workforce

A large percentage of teachers (60 per cent and above) in the State are women against a national average of 29.3. Table 4 shows the number of primary school teachers in position from 1991 to 1993

Table 4
Primary School Teachers in Position during 1991-93

Year	Total Number of Teachers	Male	Female	Percentage of Female Teachers
1991	1,00,355	37,689	62,666	62.4
1992	95,824	35,701	60,123	62.7
1993	94,436	35,113	59,323	62.8

The high percentage of female teachers is conducive to higher enrolment and retention of pupils in primary schools

4. Service Conditions

Service conditions of primary school teachers are similar to those of other employees working in different departments as specified in the Kerala Service Rules. The pay scale of primary school teacher is Rs 1125-1720. Teachers working in hilly tracts get special allowance. There is, however, no provision for incentives such as out-of-turn promotion for improved performance in terms of pupils' learning out-

come. Keeping teachers motivated once they are in the profession is a serious problem. Lack of career rewards, work rewards and recognition for a job well done, and frustrating working conditions contribute to the lack of motivation. There is a need to provide suitable performance-linked incentives to teachers to sustain their motivation for improved performance. "The most powerful incentive system is one which ties direct compensation to the performance of target behaviour" (Chapman *et al.* 1993)

5. Satisfaction with Initial Training

Pupils' performance in primary grades is abysmally poor (Jangira *et al.* 1994). One way, frequently proposed, to improve the situation is to improve the initial training of teachers.

Teachers were asked about their satisfaction regarding their initial training. They were also required to mention the aspects of initial training which they considered unsatisfactory.

It was very surprising to note that about half of the teachers in Wayanad district and one-third in Mallapuram district considered initial training unsatisfactory. The percentage of teachers who expressed dissatisfaction with different aspects of initial training is given in Table 5.

About 70 per cent of the teachers from both the districts reported inadequacy of li-

TABLE 5
Percentage of Teachers Dissatisfied with Different Aspects of Initial Training

District	Area of Dissatisfaction					
	Teaching of Theory	Practice Teaching	Field-Practical Work	Quality of Teaching Staff	Quality of Text-books	Library and Audio-visual Equipment
Wayanad	(20) 41.7	(14) 29.2	(24) 50.0	(15) 31.3	(24) 50.0	(33) 68.8
Mallapuram	(13) 43.3	(16) 53.3	(13) 43.3	(12) 40.0	(13) 43.3	(22) 73.3

Figures in parentheses represent number of teachers.

brary and audio-visual equipment. Fifty per cent teachers from Wayanad and about 40 per cent from Mallapuram reported that field/practical work and quality of textbooks were unsatisfactory. More than one-third teachers in both the districts expressed that the quality of teaching staff was wanting. Verghese (1994) also reported that many teachers felt that the existing initial training programme did not equip teachers to handle primary classes adequately. Perhaps, the training had very low practical orientation.

6 Participation in In-service Training Programmes

In-service training is considered to be a key aspect of school improvement efforts (Sparks and Loucks-Horseley, 1990). It stimulates professional competence and development of teachers and improves school practices.

Teachers were asked to mention whether they underwent in-service training during the last five years. The data collected in this regard revealed that more than 80 per cent teachers in the Wayanad district and about 40 per cent in the Mallapuram district participated in in-service training programmes during the last five years. Most of these teachers underwent training of one or two weeks' duration.

The number of primary school teachers in Mallapuram and Wayanad districts, is 18,268 and 2,152 respectively. From this, it becomes evident that one DIET in Mallapuram district cannot take care of the training needs of all the primary schools in the district. Additional facilities for in-service training need to be created at the sub-district level to meet the training needs of teachers.

7 Transfer of Training

Unless the knowledge and skills acquired in an in-service programme are applied effectively in the workplace—school or classroom—

improvement in classroom practices is not feasible. Teachers were asked whether they were making use of learnt practices in their classrooms. Data in this regard is given in Table 6.

TABLE 6

Percentage of Teachers Not Making Use of Learnt Practices

District	Percentage of Teachers		
	Male	Female	Total
Wayanad	24.0	18.0	21.0
Mallapuram	03.0	05.6	5.0

About 21.0 per cent teachers in Wayanad district and 5.0 per cent in Mallapuram district were not using learnt practices in their classrooms. Now availability of needed materials, heavy syllabus, heavy teaching and non-teaching work load, and the irrelevance of training were the reasons given by teachers for not making use of learnt practices. Van Tulder (1992) also reported that "teachers often complain that in-service courses are too theoretical, too far removed from the daily working experience of teachers. Training activities do not result in changes in teachers' instructional behaviours". Bolam (1987) too reported that "present INSET programmes are insufficiently related to specific needs and concerns of the participants, they tend to offer theory which is unrelated to practice."

Veenman *et al.* (1994) suggested that "for transfer of training to occur, trained behaviours must be generalised to the job context and maintained over a period of time on the job."

The study revealed that in-service training provided to teachers was a one-shot affair as most of them underwent in-service training only once. Daresh (1987) observed that "staff development and in-service education is viewed as more effective when it is a part of training

that continues over an extended period of time" There is a need for recurrent training of teachers

8 Training Needs

Teachers were asked whether they needed training. It was heartening to note that almost all the teachers (96 per cent) in both the districts reported that they needed in-service training. They were also asked about the areas in which they need training

Teachers reported that they needed training in the areas of upgradation of knowledge in school subjects, methods of teaching, play-way techniques of teaching, preparation and use of improvised teaching aids. In-service training programmes, to be effective, need to be based on the felt needs of teachers.

9 Duration of In-service Training

About 60 per cent teachers in both the districts preferred one to two weeks training and the rest desired three weeks' training. The study conducted by Veenman *et al.* (1994) reported that "the length of the training is negatively related to classroom level impact". From this, it is inferred that short-duration courses may be more effective. However, there is a need to conduct research in this area to determine the relative effectiveness of varying durations of training programmes.

10. Improving Teachers' Participation in INSET Programmes

Teachers were requested to mention factors which would increase their willingness to participate in in-service training programmes.

Competent resource persons, consulta-

tion with teachers to assess training needs, support to teachers to implement new ideas/innovations acquired during in-service programmes emerged as important factors which could enhance teachers' willingness to participate in in-service training programmes

Implications

- The State of Kerala should enhance the minimum academic qualification for the post of a primary school teacher from 10 years' to 12 years' schooling with a view to improving the quality of primary education
- Specific, intensive content upgradation programmes need to be launched for under qualified teachers
- The State should take immediate steps to match teacher supply with its demand.
- Suitable work rewards, career rewards need to be provided to teachers to sustain their motivation for improved performance
- Curriculum for initial training and its transactional approach needs to be modified suitably to turn out competent teachers
- Facilities for in-service training need to be augmented by creating teacher centres at the sub-district/block level
- The State should develop a suitable mechanism for need-assessment of teachers
- The State should develop in-service education policy.
- One-shot training needs to be replaced by recurrent training with frequent opportunities for back-up training.
- Suitable training methodology needs to be devised to make in-service training more effective.

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Socially Useful Productive Work Programme at the Secondary Stage : A Study

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The present investigation aimed at studying the functioning of the SUPW programme and suggesting measures for its effective implementation at the secondary stage in Himachal Pradesh. A sample of sixty craft teachers was selected for the study. The study revealed that the SUPW programme had not been effectively implemented. Suggestions relating to different aspects of the SUPW programme have been given for its effective implementation at the secondary stage.

THE EDUCATION Commission (1964-66) emphasised the importance of Work Experience (WE) to forge a link between education and productivity and recommended that Work Experience be made an integral part of general education. It defined Work Experience as "participation in productive work in school, in the home, in a workshop, on a farm, in a factory or in any other productive situation."

The Curriculum for the Ten-Year School — A Framework (1976), NCERT, included Work Experience as an integral part of the school curriculum as visualised by the Education Commission.

The Ishwarbhai Patel Committee popularly known as the Review Committee (1977) which reviewed the above document, recommended that Socially Useful Productive Work

(SUPW) be an integral part of the curriculum of ten-year school to provide children with opportunities of participating in social and economic activities inside and outside the classroom, thereby enabling them to understand the scientific principles and processes involved in different types of work. The Committee described SUPW as "Purposeful, meaningful, manual work resulting in either goods or services which are useful to the community." The Committee recommended three phases in the teaching-learning process of SUPW, viz., a study of the world of work through observation and enquiry, experimentation with materials, tools and techniques, and work practice. The productive manual work situations were to be drawn from six need areas, i.e. health and hygiene, food, shelter, clothing, culture and recreation, and community work and social service. The Committee recommended 20 per cent of the total instructional hours for SUPW. The Committee further recommended that this area has the status of a full-fledged subject for the award of certificates at the end of Class X. As per the recommendations of the Committee SUPW was introduced at the school level in different States and Union Territories in India.

Researches in the area of SUPW have been undertaken by NCERT (1978), Bajpai and Rao (1980), Dash (1981), Sen Gupta (1981), Reddy *et al* (1984), Sindhe (1985), Kumar (1986), State Institute of Education (1986), Sudha Rao *et al* (1987), Singh (1989), Swain (1992) and Swain and Das (1994).

Keeping in view the non-existence of some significant studies on SUPW in Himachal Pradesh, the present study is both desirable and unique. Furthermore, there are many constraints which are likely to hinder the effective implementation of the SUPW programme. In this context proper evaluation of SUPW programme can identify the shortcomings, deficiencies,

and effectiveness of the programme implemented, so that corrective measures could be taken in time. So, in order to implement the SUPW programme effectively at the secondary stage in Himachal Pradesh, it is imperative that simultaneous attempts be made to collect and analyse relevant data on different aspects of the programme. Therefore, systematic evaluation of the programme as a whole as well as the different components in the implementation of the programme should be undertaken, and the outcome of those researches would be utilised for strengthening the SUPW programme.

Objectives

The present study had the following objectives:

1. To study the functioning of the (SUPW) programme at the secondary stage in Himachal Pradesh in terms of : criteria adapted for selection of SUPW activities, SUPW activities introduced, physical facilities available, qualification of teachers imparting instruction in SUPW activities, teaching methods, availability of instructional materials, allocation of time, co-ordination, provision of supervision, allocation of finance, list of articles/products prepared/produced by the students, procedure of disposal of products, provision of incentives, involvement of local community/parents, and procedure of evaluation of students' performance.
2. To suggest measures for the effective implementation of the (SUPW) programme at the secondary stage in Himachal Pradesh.

Delimitations of the Study

1. The present study was delimited to government high/senior secondary schools of five districts of Himachal Pradesh.
2. The study was based on the recommendations of the Review Committee (1977) on

SUPW in its report entitled the 'Curriculum for the Ten-Year School'

Method

The study was carried out through the Descriptive Survey method of research

Sample

The sample of the study consisted of sixty craft teachers and other teachers providing instruction in SUPW activities. The sample was selected through purposive sampling technique from 33 government high/senior secondary schools of five districts of Himachal Pradesh namely Shimla, Solan, Bilaspur, Una and Kinnaur.

Tools

To collect information about the functioning of the SUPW programme at the secondary stage, a questionnaire was developed. A Pilot Study was undertaken before drafting the questionnaire so as to get some information about issues pertaining to the study.

To verify some of the responses of the respondents, an observation schedule was also developed.

Procedure

To ensure quick and complete return of the questionnaires, these were administered personally to the selected sample of teachers. Before administering the questionnaires, proper rapport was established with the teachers. Then the purpose of the questionnaire was explained to them. The respondents were assured that the questionnaires were meant for research purposes and would not affect them in any way and the information furnished by them would be kept confidential. They were requested to feel free while responding to each item in the questionnaire.

Statistical Techniques

Data were analysed in terms of frequencies and percentages. Besides quantitative analysis of the responses, qualitative analysis was also adopted. In general, itemwise analysis was carried out.

Findings

The following were the findings of the study.

SUPW was a compulsory subject of study at the secondary stage in Himachal Pradesh.

More than 40 per cent of the teachers stated that facilities available in the institution feasible to carry out the activity/activities to successful completion, the products which were directly consumable by the students, interests of the students, the developmental level of the students and resource persons available in the institution, were the criteria followed by their institutions while selecting the SUPW activities.

As many as 36 different SUPW activities had been introduced at the secondary stage. These were, agriculture, vegetable growing, gardening, flower growing, embroidery, tailoring, knitting, canning, white-washing, drawing, painting, modelling, weaving, paper-work, jute-work, wool-work, book-binding, making decoration piece, cleaning of the school campus, cleaning of the classroom, duster making, chalk making, candle stand making, tooth paste making, envelope making, file cover making, puppet making, doll making, pencil box making, album making, greeting cards making, making wall hangings, making magazine holder, jam making, jelly making and pickle making.

Community service was not performed under SUPW in 64 per cent of the schools. This may be due to lack of interest on the part of teachers and heads of the institutions.

All the teachers reported that their schools did not have adequate physical facilities for

various SUPW activities. The inadequacies of physical facilities were relating to space, accommodation, raw materials, equipment and workshops. It was due to non-allocation of funds by the State Government for the SUPW programme.

About 40 per cent of the teachers imparting instruction in SUPW activities were matriculates. Furthermore, more than 60 per cent of the teachers did not have any technical or professional qualification in SUPW activities. In 33 per cent of the institutions only crafts teachers were providing instruction in SUPW activities. However, in 45 per cent of the institutions only general subject teachers were imparting instruction in SUPW activities, perhaps due to the fact that crafts teachers had not been appointed in those institutions by the State Government. In the rest of the institutions, crafts teachers as well as general subject teachers were providing instruction in such activities.

All the teachers stated that there was no provision of orientation courses and refresher courses for them at the State level.

The teachers followed as many as five methods in providing instruction in SUPW activities. Demonstration and work practice were the popular methods. Only eight per cent of the teachers followed the problem-solving method. It is worth mentioning that some of the teachers followed more than one method in providing instruction in SUPW activities.

All the teachers reported that instructional materials on SUPW in terms of source books, guide books, doing-learning units, unit plans, resource units and manuals, etc. were neither published nor available in the State.

There was no uniformity in the allocation of periods for SUPW. Usually two periods of 35 minutes' duration had been allotted to SUPW in Classes IX and X. However, three per cent of the teachers reported that no period had been allotted to SUPW in their institutions. It

is pertinent to note that seven per cent of the teachers stated that though four periods had been allotted to SUPW in their institutions these were used for teaching other subjects. It may be due to the fact that SUPW is a non-examination subject at the secondary stage in the State.

In all the institutions extra time in terms of after-school hours, before-school hours, vacations, Sundays and holidays were not utilised for SUPW activities. Moreover, 97 per cent of the teachers stated that leisure time was not utilised for SUPW in their institutions.

At the State level, the Director of School Education co-ordinates the SUPW programme and the District Education Officer, with some assistance, co-ordinates such programmes at the district level. Moreover, crafts teachers/general subject teachers in consultation with the head of the institution co-ordinate such programmes at the school level.

There was no SUPW cell in the SCERT of Himachal Pradesh and hence there was hardly any co-ordination between SCERT and the high/senior secondary schools of the State regarding the SUPW programme.

About 92 per cent of the teachers stated that there was provision for supervision of the SUPW programme in their institutions. The supervision was done either by crafts teachers, general subject teachers or heads of the institutions.

All the teachers reported that no financial assistance was provided to their institutions by the State Government for the SUPW programme. About 67 per cent of the teachers stated that the programme was managed keeping in view the facilities available in their institutions. However, the rest of the teachers reported that the programme was managed by using the raw materials brought by the students.

A number of different articles were pre-

pared by the students under SUPW. These were decoration pieces, wall hangings, candle stand, chalk, envelope, file cover, paper flower, puppet doll, pencil box, greeting cards, album, magazine holder, jute mat, sweater, socks, gloves, stockings, cap, scarf, frock, baby set, pillow cover, cushion cover, sofa cover, table cloth, handkerchief, tunic set, tooth paste, jam, jelly, pickle and potatoes. It is pertinent to note that 22 per cent of the teachers reported that no articles were prepared by the students of their institutions under the SUPW. This may be due to non-availability of raw materials.

The procedure of disposal of products varied from institution to institution. The products were either taken by the students, kept in the institutions or used by the school community. It is worthy mentioning that a four per cent of the teachers reported that the products of SUPW were sold to the local community.

A very high percentage of teachers (93 per cent) stated that there was no provision of incentives for students participating in SUPW activities and teachers providing instruction in such activities in their institutions. It may be due to non-allocation of funds by the State Government for such programmes.

A large majority of teachers (95 per cent) reported that the local community/parents were not involved in SUPW programme in their institutions. It may be because of the lack of interest of teachers and heads of the institutions to involve the local community in the programme.

All the teachers reported that SUPW was a non-examination subject in their institutions. The procedure of evaluation was internal and practicals carried cent per cent weightage. A high percentage of teachers (87 per cent) also reported that SUPW was given less importance in comparison with other subjects.

It is clear from the above findings that the recommendations of the Review Commit-

tee (1977) regarding different aspects of the SUPW programme had not been effectively implemented at the secondary stage in Himachal Pradesh. The findings are partially supported by Singh (1989) who found that the SUPW programme had not been properly implemented at the secondary stage in Shimla district of Himachal Pradesh.

Suggestions

The following suggestions may be given on the basis of the findings for the effective implementation of the SUPW programme at the secondary stage in Himachal Pradesh.

- While selecting the SUPW activities, it may be kept in mind that the activities should be educative, productive and socially useful.
- The heads of the institutions and teachers may take interest in involving the students in community service activities.
- Participation of the students in SUPW activities needs availability of infrastructural facilities like space, accommodation, raw materials, equipment, workshops etc. In view of this it is suggested that at least threshold facilities for undertaking productive and service-based activities in schools be provided by the State Government in terms of finance for the successful implementation of the programme.
- The Directorate of Education of Himachal Pradesh may plan to appoint at least two teachers with technical/professional background in each school to coordinate the SUPW programme and all teachers may be involved in the programme. Involvement of vocational teachers wherever available, may be helpful.
- SUPW/Work Experience may be an integral part of pre-service and in-service teacher education programmes. Special orientation programmes of short-term duration may be

conducted at least once in six months for craft and general subject teachers at block, district, State and national levels by the State and Central governments for qualitative improvement of the teachers

- How to provide instruction in different innovative methods may be taught to teachers through pre-service, in-service training, orientation courses and refresher courses
- SCERT, SIE and voluntary organisations of the State may take steps to produce literature and instructional materials on SUPW which may be helpful to the teachers
- An SUPW cell needs to be established by the State Government in SCERT for organisation of in-service training of teachers, providing instruction in such activities, supervision of the SUPW programme in schools and development of instructional materials, etc
- Time tables of schools may be rearranged by the heads of the institutions in such a way that SUPW activities find a proper place in them like other subjects. Time allocation for SUPW should not be less than 20 per cent of the total instructional time and SUPW periods should not be utilised for teaching other subjects
- Supervision of the SUPW programme may be done by technically qualified personnel
- Adequate finance should be provided by

the State Government to the schools in time for smooth functioning of the SUPW programme. Each high/senior secondary school may be provided at least Rs 10,000 per year for such a programme.

- Raw materials for different SUPW activities may be provided to the students by the State Government
- Incentives/awards/prizes may be given to students by the State government for the best performance in SUPW.
- School, block, district and State level exhibitions of SUPW products may be organised by the State Government to ensure community/parental involvement
- Possibilities of involvement of other agencies may be explored
- SUPW should be made an examination subject. Both internal and external evaluation may be conducted to reduce bias of teachers. Evaluation may be continuous and may take care of theory and practice in an integrated manner. Grades/marks obtained by the students in SUPW may be shown in their certificates and may be counted towards the division they obtain.

To conclude, the role of the head of the institution seems to be crucial in the whole programme. If he is enthusiastic, positive and has a willingness to organise the activities, many problems may be solved in the way of successful implementation of the SUPW programme

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Job Satisfaction of Teachers Working in Residential and Non-Residential Schools

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The study aims at analysing the level of job satisfaction of men and women teachers working in two types of schools – residential and non-residential. The sample consisted of 400 teachers equally distributed between the two types of institutions and the two sexes. The job satisfaction of the teachers was measured by a job satisfaction scale. It was found that, on the whole, teachers working in residential schools had a higher level of job satisfaction than those working in non-residential schools. Women teachers were more satisfied than their men counterparts. Interaction effects were not significant. The differences in the level of job satisfaction of different sub-groups of teachers were also analysed and discussed.

THE SUCCESS of any system of education depends on the quality of its teachers. It is no exaggeration to say that any system of education cannot ever rise above the level of the quality of its teachers. If education is at the root of the progress of any country, the teacher is at the root of education. Thus, any country must be able to attract the most talented to the

teaching profession, provide them all facilities to do their work so that the desired ends of education are attained.

But, today, teaching is considered a dead-end job with very little pay, very low status, and very little power. Moreover, society does not give much recognition to the teaching profession unlike in the case of other profes-

sional workers like the doctors, lawyers and engineers. The situation relating to teachers' status and teacher-pupil relationship today is quite contrary to what was obtaining earlier.

As such, at present, a large number of teachers seem to continue in the profession only as ordinary wage earners, and no more than that. There is no gainsaying the fact that a mere wage-earning attitude does not help one to fit into the teaching profession. The teachers' job needs zeal, fervour and devotion towards work and inculcation of knowledge, attitudes and values among children.

The teacher, being the corner-stone of the arch of education, must be satisfied with his job so that he delivers the goods to the best of his ability. A dissatisfied teacher is lost not only to himself but also to the entire society. Therefore, it is essential to see that the teachers are satisfied with their occupation, so that they can produce the best citizens who can become the backbone of the future society. Unless the teacher is sufficiently efficient, greatly interested and immensely involved in his work and does it satisfactorily, all efforts made to effect any improvement in the field of education are bound to fail.

In tune with the onerous responsibility laid on the shoulders of the teachers, and in view of the disastrous consequences of job dissatisfaction on the part of the teacher, Commission after Commission emphasised and re-emphasised the necessity to improve the lot of the teacher and several attempts were made to ameliorate the position of the teacher.

Are the teachers still dissatisfied with their job? If so, what are the pockets of dissatisfaction? If it is possible to isolate the factors of dissatisfaction among the teachers, attempts can be made either to change the dissatisfying conditions or to reduce their intensity so as to increase the holding power of the profession.

In Andhra Pradesh, the government has

established residential schools in each district. Under this system the teachers and students live in the same campus. The government is spending huge amounts of money to maintain these schools by providing free lodging and boarding to the students, and better facilities to the teachers and the learners in the form of laboratory, library, classroom, playgrounds, etc. The workload, qualifications, as well as the salaries of teachers working in these schools are somewhat higher than those of their counterparts working in non-residential schools. What is the level of job satisfaction of these teachers in contrast to the teachers of non-residential schools? Researches have not been conducted on these aspects.

Several investigations have been carried out to study the relation between sex and job satisfaction. There are three contradictory trends observable in the literature on the subject: Women employees are more satisfied with their jobs than their men counterparts (Chase, 1951; Belasco and Alutto, 1972; Anand, 1972; Bernard and Kulandaivel, 1976; Venkata Rami Reddy and Krishna Reddy, 1978; Venkata Rami Reddy and Rama Krishnaiah, 1981; Chapman and Lowther, 1982; O Neal, 1986; Sangha, 1989; and Harnek and Mohal Lal, 1990). On the contrary Hullin and Smith (1964), Chen (1977), Goble (1977) and Patnaik and Panda (1982) found that men were more satisfied than their women counterparts. Depicting yet another trend, Enghardt (1973), Atteberry (1977), Cohen (1977), Rao (1981), Timothy (1989) and Sundararajan and Minnalkodi (1991) reported that there was no significant difference between the job satisfaction of men and of women workers. How does job satisfaction of men and women teachers working in residential schools contrast with the job satisfaction of men and women teachers working in non-residential schools? Investigations into these factors may throw valuable light on many aspects which

may be of immense utility to the administrators as well as theoreticians

Hence, the subject chosen for the study was, 'Job Satisfaction of Teachers Working in Residential and Non-residential Schools'

Hypotheses

The following hypotheses were formulated for the investigation

- 1 Teachers of residential and non-residential schools would not differ significantly in the level of their job satisfaction
- 2 There would not be any significant difference between the level of job satisfaction of men and women teachers.

Design and Sample

The study was essentially of a 2 x 2 factorial design with two types of schools (residential and non-residential) and two sexes (men and women). The sample for the investigation consisted of 400 teachers, equally distributed between the two types of schools and the two sexes. The sample was selected by a multi-stage stratified random sampling procedure from residential and non-residential schools located in S V. University and S K. University areas of Andhra Pradesh

Method

The job satisfaction of the sample of teachers was measured with the help of a job satisfaction scale, especially constructed for the purpose of the study, following the usual procedure of test construction. A large pool of items was prepared, collecting the same from a number of sources. The items were sorted out, edited and a preliminary form of the job satisfaction scale containing 120 items was prepared. The items were arranged on a five-point scale — strongly agree, agree, doubtful, disagree and strongly disagree. For the purpose of scoring, numerical weights were assigned to

each of the five categories suggested by Likert (1932). It was administered to a sample of 200 teachers and the collected data was item analysed as suggested by Likert (1932), and 104 items for which the 't' values were significant at or above 0.05 level were selected. Further, the data was factor analysed following varimax rotation. On the basis of the results obtained in the factor analyses, 102 items grouped under 10 factors were selected to be included in the final form of the job satisfaction scale. The reliability and validity of the scale were established. As the score on each item could range between one and five the total score on the instrument could vary between 102 and 510 with a neutral point of 306 (Shaw and Wright, 1967)

Results and Discussion

The means and SDs of teachers belonging to residential and non-residential schools on overall job satisfaction and on the different job factors are presented in Table I

It may be seen from the Table that the mean overall job satisfaction score of teachers working in residential schools was 316.20, while that of those working in non-residential schools was 299.90. This indicates that the mean score of the teachers working in residential schools was above the neutral point (306), while that of their counterparts working in non-residential schools was below the neutral point. The 't' test was applied to see whether the two means were significantly different from the neutral point. In the case of residential schools, the 't' value obtained was 3.20. It was significant at 0.01 level. In the case of the non-residential schools also, the 't' value was significant ($t = 2.14$, significant at 0.05 level). This shows that teachers working in residential schools were satisfied with their job, while their counterparts in non-residential schools were dissatisfied with it.

TABLE 1
Means and SDs of the Job Satisfaction Scores of Teachers Belonging to Residential and Non-residential Schools

Factors	Neutral Points	Residential (N= 200)			Non-residential (N = 200)		
		Mean	SD	t	Mean	SD	t
Overall	306	316.20	45.06	3.20**	299.90	40.36	2.14*
Factor 1	84	72.31	16.91	9.78***	61.73	17.86	17.63***
Factor 2	42	52.06	9.36	15.20***	52.25	8.19	17.70***
Factor 3	48	45.40	10.18	3.61***	40.75	10.44	9.82***
Factor 4	33	38.89	6.26	13.31***	36.24	7.23	6.34***
Factor 5	21	25.19	4.09	14.49***	25.00	3.99	14.18***
Factor 6	18	20.45	3.63	9.54***	23.81	3.38	24.31***
Factor 7	18	16.72	4.48	4.04***	16.21	4.07	6.22***
Factor 8	12	13.87	2.44	10.84***	14.44	2.54	13.59***
Factor 9	18	16.10	4.24	6.34***	14.62	4.52	10.57***
Factor 10	12	15.23	2.68	17.04***	14.88	2.80	14.55***

Note 1 *** Significant at 0.001 level ** Significant at 0.01 level

* Significant at 0.05 level @ Not significant at 0.05 level

2 The same notation is followed in the tables that follow

An examination of the factor-wise mean scores of the two groups of teachers shows that the mean scores on factors 2, 4, 5, 6, 8 and 10 were above the respective neutral points. This was true for both groups of teachers. The differences between the means and neutral points was significant at 0.001 level for all the above factors as indicated by the 't' values presented in Table 1. On the remaining factors, viz., factors 1, 3, 7, and 9, teachers of residential as well as non-residential schools obtained mean scores below the respective neutral points. The 't' values were significant for all these factors also.

The above results show that the teachers of residential as well as non-residential schools, exhibited satisfaction with their job as measured by factors 2, 4, 5, 6, 8 and 10. They were dissatisfied with their job as measured by factors 1, 3, 7 and 9.

The mean scores of men and women

teachers on overall job satisfaction and on different job factors are presented in Table 2. It may be seen from the Table that the mean overall job satisfaction scores of men and women teachers were 300.13 and 315.97 respectively. The mean score of men teachers was below the neutral point (306) while that of their women counterparts was above the neutral point. Both the means were significantly different from the neutral point. This shows that men teachers were dissatisfied with their job, while women teachers were satisfied with it.

An examination of the factor-wise mean scores of men and women teachers shows that in the case of factors 2, 4, 5, 6, 8 and 10 the mean scores were significantly above the neutral point while on factors 1, 3, 7 and 9 the mean scores were below the neutral point. This was true for men teachers as well as women teachers. This indicated that both men and women teachers were satisfied with their job as

TABLE 2
Means and SDs of the Job Satisfaction Scores of Men and Women
Teachers on Different Job Factors

Factors	Neutral points	Men (N= 200)			Women (N = 200)		
		Means	SD	t	Mean	SD	t
Overall	306	300.13	36.18	2.29**	315.97	48.55	2.90**
Factor-1	84	64.14	15.80	17.78***	69.90	19.87	10.04***
Factor-2	42	51.38	8.70	15.25***	52.93	8.82	17.53***
Factor-3	48	41.25	9.78	9.76***	44.90	11.01	3.98***
Factor-4	33	37.31	6.96	8.76***	37.82	6.81	10.01***
Factor-5	21	25.15	3.95	14.86***	25.04	4.13	13.83***
Factor-6	18	21.94	4.14	13.46***	22.32	3.82	15.99***
Factor-7	18	15.79	3.71	8.42***	17.14	4.70	2.59***
Factor-8	12	13.74	2.60	9.46***	14.57	2.34	15.53***
Factor-9	18	14.79	4.23	10.73***	15.93	4.57	6.41***
Factor-10	12	14.67	2.86	13.20***	15.45	2.58	18.91***

Note: See note under Table 1

measured by factors 2, 4, 5, 6, 8 and 10, while they were dissatisfied as measured by factors 1, 3, 7 and 9. It may be seen that these results are similar to those obtained when the teachers were classified on the basis of the type of school discussed earlier.

The job satisfaction scores of the teachers were further analysed applying ANOVA of 2 x 2 factorial design to examine whether there was any significant difference between the level of job satisfaction of teachers working in residential and non-residential schools and men and women teachers. This was done separately for overall job satisfaction and for each of the 10 job factors. The results obtained in this analysis are presented in Table 3 in a summary form.¹

The F value for type of schools was 14.88

in the case of overall job satisfaction. It was significant at 0.001 level for 1 and 396 df. This shows that there was a significant difference between the level of overall job satisfaction of the teachers working in the two types of schools. It could be seen from Table 1 that the mean overall job satisfaction scores of the teachers belonging to residential and non-residential schools were 316.20 and 299.90 respectively. This shows that teachers working in residential schools were significantly more satisfied with their job than those working in non-residential schools.

It may also be seen from Table 3 that the obtained F values for type of school, were significant at or above 0.05 level for factors 1, 3, 4, 6, 8 and 9 indicating a significant differ-

¹ Only the F values and the corresponding error mean squares (EMS) were presented in the Table instead of presenting 11 separate ANOVA tables to conserve space, without loss of any essential information. The complete ANOVA tables for each of the factors can be constructed, if necessary, applying the following formulae:

MS for any variable = F value for the variable x EMS

SS for any variable = MS of the variable x corresponding df

SS for within groups = EMS x df

TABLE 3

Summary Results of ANOVA of the Job Satisfaction Scores of Teachers Classified According to Type of School and Sex

Factors	<i>F (df = 1 and 396)</i>			
	Type of Schools	Sex	Interaction	EMS
Overall	14.88***	14.05***	0.00@	1784.79
Factor-1	37.66***	11.16***	0.01@	297.23
Factor-2	0.05@	3.10@	0.15@	77.45
Factor-3	20.82***	12.77***	0.06@	104.06
Factor-4	15.29***	0.56@	0.02@	46.10
Factor-5	0.21@	0.08@	0.28@	16.46
Factor-6	86.17***	1.07@	0.32@	13.14
Factor-7	1.48@	10.10**	2.54@	17.92
Factor-8	5.25*	11.46***	0.76@	6.08
Factor-9	11.43***	6.77**	0.06@	19.04
Factor-10	1.66@	8.24**	3.66@	7.39

Note See note under Table 1

ence between the job satisfaction of teachers belonging to residential and non-residential schools on these factors

An examination of the mean scores presented in Table 1 shows that among these factors (for which the *F* values were significant) in the case of four factors, viz., 1, 3, 4 and 9 teachers of residential schools obtained higher mean scores compared to teachers belonging to non-residential schools. On the remaining two factors, viz., factors 6 and 8, teachers of non-residential schools obtained higher mean scores than those from residential schools.

Considering the mean scores on these factors in relation to the respective neutral points, both groups of teachers obtained mean scores below the neutral point in the case of factors 1, 3, and 9, while on factors 4, 6 and 8, the mean scores of both the groups were above the neutral point (Table 1).

It may be concluded from the above, results that (i) Teachers belonging to residential schools exhibited greater overall job satisfaction than their counterparts working in non-residential schools (ii) they were more satis-

fied with their job as measured by factor 4 also, (iii) on the other hand teachers of non-residential schools were more satisfied with their job as measured by factor 6 and 8, (iv) with regard to factors, 1, 3, and 9, both groups were dissatisfied, but the dissatisfaction was more in the case of teachers belonging to non-residential schools, and (v) in the case of the remaining factors, viz. factors 2, 5, 7 and 10, there was no significant difference between the level of satisfaction of teachers of the two types of schools.

An examination of the responses of the teachers of residential and non-residential schools to the items in the different job factors showed some interesting features.

Factor 1 contained items related to student indiscipline, disobedience, malpractices in examinations, lack of moral values, poor quality of students, etc., and items related to facilities such as good equipment for teaching classrooms, staff rooms, quarters, toilet facilities, etc. On almost all such items teachers of both types of schools were dissatisfied, but those working in non-residential schools expressed greater dissatisfaction on these items.

In residential schools the pupils are admitted according to merit on the basis of a selection test. On the other hand in the non-residential schools all and sundry get admitted. With the non-detention system that is in vogue today in Andhra Pradesh, students show little interest in studies and student indiscipline is rampant. In the case of residential schools, however, since students are merited and live in the hostels in the school campus under constant supervision of the teachers, indiscipline, disobedience, malpractices are relatively less.

Further, the ordinary schools are highly overcrowded and many of them do not have even the minimum facilities to teach, in the form of laboratory, teaching aids and sometimes even classrooms, not to speak of staff rooms, toilet facilities, etc. However, the residential schools have comparatively better facilities in the form of classrooms, toilet facilities, laboratory, library, etc. This explains the greater dissatisfaction with the job on the part of the teachers belonging to non-residential schools.

Similarly, in the case of factors 3 and 9 also, teachers of both types of schools were dissatisfied. On both these factors also, teachers belonging to residential schools obtained higher scores than those working in non-residential schools.

Factor 3 contained items related to dishonesty of some teachers, teasing of teachers who are strict, communal feelings among teachers, groupism, political affiliation of the teachers, communication channels from the management to the teachers, partiality of the management towards some teachers, etc. On most of these items, teachers working in non-residential schools exhibited greater dissatisfaction than teachers of residential schools.

In the case of residential schools, the teachers, students and the principal live in one

campus and the mutually beneficial interaction among them enables them to enjoy a life of universal brotherhood built upon mutual understanding and spontaneous rapport. Thus in residential schools the scope for communal bias among the teachers was less. Since the campuses were isolated and away from towns, and since the number of teachers was limited and the entire faculty was always busy with some activity or the other of the school, like supervision of study hours, deputy warden duties, etc., there was less scope for the teachers to get actively involved with political parties or for formation of interest groups.

Factor 9 contained items related to frequent changes in the education system, bossism of senior teachers over juniors, lack of interest on the part of the parents in their children's education, etc. Teachers of both types of schools were dissatisfied on these aspects also. However, the intensity of dissatisfaction was more in the case of non-residential schools. With overcrowded classes and indisciplined students, it is not surprising that the teachers of non-residential schools felt that teaching was not easy. Rarely do parents go to school to discuss the progress of the children, especially in the case of non-residential schools. As mentioned earlier, because of the large strength of the faculty and because of groupism among the teachers, senior teachers tend to boss over the juniors. But in the case of residential schools, because of the limited strength of the class, teachers may not find teaching difficult, though it may be dissatisfying to the teachers to do extra work. With a small faculty, all living in the same campus, bossism of seniors over juniors may not exist at all. It is but natural, therefore, that teachers of non-residential schools were found more dissatisfied than teachers of residential schools as measured by this factor.

On the other hand, in the case of factor 4,

both groups of teachers were satisfied. But teachers of residential schools obtained higher scores than those from non-residential schools. This factor included items related to academic atmosphere, possibility for exhibiting creative ability in the job, social prestige, interference of government in the administration of the school etc.

Generally, residential schools are located away from the town, in a good environment. Students are selected on the basis of merit. These aspects lead to a relatively better academic atmosphere in these schools compared to the non-residential schools. Since the strength of the classes is limited and students are somewhat capable, and there is a proper atmosphere, the teachers can exhibit their creative abilities in their job unlike in the non-residential schools which are bogged down by overcrowded classes and lack of academic atmosphere. Further, the results in the final examinations are always better in residential schools, compared to non-residential schools. This leads to a higher social prestige in the case of teachers of residential schools.

In contrast to the above, on factors 6 and 8 teachers of non-residential schools obtained significantly higher mean scores than their counterparts in residential schools.

Factor 6 contained items related to leisure, job security and pension. The teachers of residential schools have to do extra duties like supervising the students' study, club activity, group discussions, deputy warden duties, etc. Thus they are always engaged in some work or other. Naturally, they feel that they do not have sufficient leisure. The Government of Andhra Pradesh established residential schools only about seven or eight years back, under the control of Andhra Pradesh Residential Educational Institutions' Society. Thus, some of the benefits like pension, regularisation, etc., enjoyed by the teachers of other schools are yet

to be extended to the teachers of residential schools. The teachers of residential schools were naturally not much satisfied on these aspects compared to their counterparts belonging to non-residential schools.

Similarly, on factor 8 also, teachers of non-residential schools obtained a higher mean score than those working in residential schools. An examination of the items in this factor shows that there were items like 'our management takes a lot of time to solve our problems', 'we have sufficient holidays', 'we are not allowed to participate in politics', etc. The administrative office of the residential schools is located in the State Capital at Hyderabad, while the administrative offices of the non-residential schools are located in the respective district headquarters. Because of decentralised administration, the management of non-residential schools can solve the problems of the teachers more quickly than in the case of residential schools. In residential schools, the teachers have to do various other duties (supervision of studies, club activity, deputy warden duties, etc.) during holidays also, because the students live in the campus under the supervision of the teachers. Thus the teachers of residential schools do not feel the holidays (Sundays, etc.) are holidays, unlike in the case of teachers working in non-residential schools. Teachers of residential schools also feel dissatisfaction that they do not have any scope to participate in politics, since their schools are isolated and neither do they have time for such activities, unlike in the case of non-residential schools. As such, teachers of non-residential schools were more satisfied than those working in residential schools as measured by this factor.

Considering the F values for sex, it may be seen from Table 3 that the F value for overall job satisfaction was 14.05. It was significant at 0.001 level for 1 and 396 df. This indicates that there was a significant difference

between men and women teachers with regard to the level of their overall job satisfaction. The mean overall job satisfaction of men teachers was 300.13, while that of their women counterparts was 315.97 (Table 2). This shows that women teachers were significantly more satisfied than their men counterparts.

An examination of the F values for different job factors shows that the F values were significant for factors 1, 3, 7, 8, 9 and 10, indicating a significant difference between the two sexes with regard to the level of job satisfaction as measured by these factors. Women teachers obtained higher mean scores than men teachers on all the above factors. It may be seen from Table 2, however, that the mean scores of both groups of teachers were below the neutral point in the case of factors 1, 3, 7 and 9 while on factors 8 and 10 both groups obtained mean scores above the neutral point.

It may be concluded, therefore, that (i) women teachers were significantly more satisfied than their men counterparts on factors 8 and 10 and on overall job satisfaction; (ii) in the case of factors 1, 3, 7 and 9, women teachers were less dissatisfied than their men counterparts; and (iii) on the remaining factors viz. 2, 4, 5, and 6 there was no significant difference between the two sexes.

An examination of item-wise responses of men and women teachers reveals the following. As mentioned earlier, factor 1 contained items related to student indiscipline, disobedience, poor quality of students, etc., and items related to facilities like quarters, staff rooms, toilet facilities, etc. In the Indian society where traditionally women are treated with great respect, even today the fair sex is usually dealt with more fairly in terms of providing necessary facilities like quarters, staff rooms, toilet facilities, etc. Since women are more patient and tolerant, probably they do not feel as much disgusted as their male counterparts with the

below average students, indiscipline, etc. This explains the lesser dissatisfaction on the part of women teachers compared to men teachers on this factor.

Similarly, in the case of factors 3, 7 and 9, women teachers were less dissatisfied than their male counterparts. According to Kuhlén (1963) and Venkata Rami Reddy and Krishna Reddy (1978), a job is a less consuming aspect of a woman's life compared to men. This is especially true in the Indian society where it is said *Udhogam Purusha Lakshnam* (being employed is a characteristic of men). The same dictum did not apply to women. Man is very often the sole bread winner of the family. More often than not, women work only to supplement the income of the family or to spend time (Venkata Rami Reddy and Krishna Reddy, 1978). Since a job is only of secondary importance to women (family and domestic work being their first occupation, especially in the Indian society), it is possible that women ignore several dissatisfying conditions which bother men. As such, women feel less concerned than their male counterparts about different aspects of the job, like lack of communication of policy changes, system of examinations, bickerings and groupism among colleagues, etc. (factor 3), medium of instruction, school environment, etc. (factor 7), frequent changes in the education system, lack of interest on the part of parents in their children's education, policies of management and reimbursement of medical expenditure, etc. (factor 9).

In the case of factors 8 and 10, both men and women exhibited satisfaction. But women teachers obtained higher scores than their male counterparts. As mentioned earlier, probably they are less concerned about the management taking a lot of time to solve their problems, not allowing them to participate in politics, etc. Further, men teachers pick up quarrels with headmasters more often than women teachers.

do and so the latter tend to have better relations with the headmasters (factor 8), probably the headmasters also treat the women teachers more fairly in recognising their capacity. Cordial relation between them and the headmaster probably makes them feel that their headmaster is efficient, unlike in the case of men teachers. Further, men teachers tend to acquire higher qualifications so that they may get promotions or quit the job and seek better opportunities elsewhere. Hence, probably, women teachers rather than men feel that their job is suitable to their qualification (factor 10).

Considering the interaction effects, it may be seen from Table 3 that the *F* value for the interaction between type and sex was 0.00 in the case of overall job satisfaction. This shows that the difference between the level of job satisfaction of teachers working in residential and non-residential schools was independent of the sex of the teachers. In other words, the effect of the type of school on the job satisfaction of the teachers was independent of the sex of the teachers.

Conversely, since *A* × *B* interaction is identical with *B* × *A* interaction, it may also be stated that the difference between the job satisfaction of men teachers and women teachers was independent of the type of schools in which they were working (Edwards, 1971).

It may also be seen from the table that none of the *F* values for the interaction between type and sex for the different job factors was significant. This indicates that the effect of the type of school was independent of the sex of the teachers and vice-versa for all the ten job factors.

It may be concluded from the above results that, in general, teachers of residential schools were more satisfied than teachers of non-residential schools.

Further, women teachers were more satis-

fied with their job than their male counterparts. These results are in line with the findings of Belasco and Alutto (1972), Anand (1972), Bernard and Kulandaivel (1976), Venkata Rami Reddy and Krishna Reddy (1978), Venkata Rami Reddy and Ramakrishnaiah (1981), O'Neal (1986) and Sundarajan and Rajasekhar (1989).

On the other hand, Cohen (1977), Rao (1981), Timothy (1989) and Sundarajan and Munnalkodi (1991) observed that there was no significant difference between men and women with regard to the level of their job satisfaction. Chen (1977), and Patnaik and Panda (1982) reported that men were more satisfied than their women counterparts. The results of the present investigation do not support the above findings.

Conclusions

- 1 Teachers working in residential schools were more satisfied than their counterparts belonging to non-residential schools in the case of overall job satisfaction and on factor 4. On the other hand, teachers of non-residential schools were more satisfied with the job as measured by factors 6 and 8. In the case of factors 1, 3, and 9, both groups were dissatisfied, but the dissatisfaction was more in the case of teachers belonging to non-residential schools. The two groups did not differ with regard to the remaining factors, viz., factors 2, 5, 7 and 10.
- 2 Considering the sex variable, women teachers exhibited significantly higher level of overall job satisfaction and job satisfaction as measured by factors 8 and 10. In the case of factors 1, 3, 7 and 9, women teachers were less dissatisfied than men teachers. On the remaining factors, viz., 2, 4, 5 and 6 there were no significant differences between the two sexes.

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Book Review

Dear Teacher

by

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Triograph Offset, Dibrugarh, Assam, July 1994, pp 50

It is evident from the title of the book that it intends to provide useful guidelines and valuable tips to the teacher. It is meant not only for the benefit of working teachers but also for those who are currently undergoing teacher-training or in-service education.

In the brief introduction the author says that every teacher possesses two very important ingredients, i.e. basic intelligence and thorough knowledge of the subject(s) that she/he teaches. The third ingredient is the methodology of good teaching — classroom strategies so to say. Thirteen topics related to the methodology of teaching have been discussed in the book. Each of these topics is independent of the other. The topics dealt with in the book are: 'Context Confers Meaning', 'Order and Chaos', 'Priority of the Whole', 'The 9-dot Problem', 'The Import of Form and Order', 'Controlled Noise is Welcome', 'Swimming and Skating', 'Convergent and Divergent Thinking', 'Of

Cheques and Bills', 'Interpersonal Relationships', 'A Blob of Marmalade', 'Taxonomy of Objectives' and 'Marks are Deceptive'. The detailed exposition of all these topics is proof of the author's gruelling spade work in locating, procuring and digesting all the reading materials capable of making one a better teacher.

The idea presented and the strategy outlined under each of the headings mentioned above is represented and explained through diagrams and illustrations. The simple and easily comprehensible language coupled with these illustrations make the abstract ideas so concrete and interesting that one is tempted to read the whole book in one sitting. A brief description of some of the topics is being presented below.

The first topic in the book is 'Context Confers Meaning'. It impresses upon the reader that anything taken out of the context loses its meaning altogether or at least the sharpness of

its meaning is significantly lowered. With the help of an example 13 it has been shown that it connotes different meanings in different situations. When written in the series 11, 12, 13, 14 it denotes number '13' but when written as, A, 13, C.D, it denotes, the letter 'B'. It is the duty of the teacher to identify and highlight the proper context. While teaching a new topic or a new chapter, the teacher should spend quite some time with the students giving them a clear picture of the background by highlighting the terms, concepts, methods, principles or theories with which the topic under consideration is closely linked. This brief but good introduction helps the students to assimilate new knowledge. They understand where and how to place the newly acquired items in relation to their already existing storehouse of knowledge.

In the lesson 'Priority of the Whole, the learned author with the help of pictures, has proved that a WHOLE is more than the sum of its PARTS. As teachers, we very often fail to appreciate this fact, and as a result our teaching fails to help our students in comprehending lessons, units and subjects in their entirety. Sometimes we pick up certain points from the lesson or important topics from the course and teach them without caring to show our students the inter-relationships among them. Giving examples from the subject of history, the author has proved that isolated and uncorrelated facts, no matter how neatly they are presented, cannot organise on their own into a meaningful whole. It is rather the systematic organisation of the whole that determines the properties and functions of the elements constituting the whole. In the words of the author, "A proper appreciation of this psychological truth is sure to bring about significant improvement in your approach to teaching."

'Controlled NOISE is Welcome', the seventh topic of the book provides useful tips to

the teacher teaching any subject in any class. These tips also provide the teacher a few minutes off from the heavy duty of incessant talking and writing within the classroom without any harm to the students. For example, the English teacher may ask the students to write as many words as possible ending in 'ful', 'ish', 'nce', 'out', 'ill', like 'hopeful', 'furnish', 'chance', 'bout', 'drill' etc. Such exercises, apart from giving the teacher a little respite, will keep the students fruitfully busy. They will develop the healthy habit of consulting the dictionary, learning new words from one another, and become careful about spelling. Besides these types of exercises, the author has suggested a number of problems from mathematics, science and other subjects which could be given to the students to solve on their own. Students, while attempting these problems, may make some noise in the classroom, but that would be completely under the control of the teacher and would never lead to chaos. The author concludes the lesson by welcoming such interactive noise created by the students. He says, "I firmly believe that our education system will have to learn to tolerate this much noise in our classrooms for the sake of active learning by our next growing generation"

The topic 'Convergent and Divergent Thinking' emphasises the fact that both types of thinking are equally important in our life. However, in the classroom, the teachers, mostly ask convergent questions only. Such questions demand single correct answer. The following questions are examples of convergent thinking questions : What is the square root of 625? Why is the bottom of any utensil blackened? In which year was the first Battle of Panipat fought? Here the teacher blames the students, if they are not able to answer such questions. On the other hand, if the teacher asks well planned divergent questions, the students will be free to say something of their own. They

will form the habit of independent thinking and thereby develop self-confidence. Examples of divergent questions are: 'What are the causes of environmental pollution?' 'What ways and means would you suggest for quick removal of illiteracy from India?' 'What are the consequences of the lack of atmosphere, on the surface of the moon?' Initially, the divergent questions should be based on easy topics and gradually the teacher can move towards tougher ones. The author is confident that "in the initial stage of contact, if the teacher can succeed in eliciting responses from the students through carefully framed simple, amusing, divergent and thought provoking questions, she/he is sure to get full cooperation from them ever afterwards".

This brief description provides a glimpse of the treatment of the topics in the book. The author has tried to encompass a variety of topics dealing with different types of teaching-learning strategies that are essential to make

the students more responsive, interactive and intelligent participants in the classroom.

Prof. M. K. Sarma, the author of the book *Dear Teacher*, is a reputed teacher-educator from Dibrugarh University, Assam. He has provided very useful and practical hints to the teacher teaching any subject in any class or school, college or University. All the innovative and novel ideas provided by him have been practically applied and tested in different situations of classroom settings by the author himself.

The linguistic presentation of the book is simple, interesting and enticing. The ideas have been suitably illustrated with simple figures and examples of day-to-day life. This valuable book costs only Rs. 25. The book is a precious gift to every teacher teaching any subject at any stage of education. The book must find a place in every library and every institution involved in teaching and/or learning activities.

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K. Singh
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TO OUR CONTRIBUTORS

JIE invites articles/papers on the impact of educational research on classroom practices and policy decisions. Specific examples where this impact is apparent may be given.

— GENERAL EDITOR

Evaluation of Vocational Competencies

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To evaluate is to determine the value or worth of something. Evaluation really helps to improve the educational process. It is for quality control. Evaluation in vocational education is mainly concerned with the assessment of the extent to which the vocational competencies have been attained by the vocational students. These competencies related to cognitive and psychomotor domains, alongwith the attainment of competencies in the affective domain. The present paper therefore suggests a scheme of continuous and comprehensive evaluation. The author strongly feels that every vocational teacher should be trained in developing evaluation tools and items, for evaluation of vocational competencies.

EVALUATION is the process of determining how far the goal set for the target to be evaluated has been achieved. Evaluation of an educational programme has two components : programme evaluation and performance evaluation. While the former is concerned with the assessment of the effectiveness of the process of implementation of the educational programme, the latter is confined to determine how far the students have progressed in attaining the goal set for them in the course. Here our objective is limited to the evaluation of

vocational competencies attained by the students in Vocational Education Programme (VEP).

Rationale of Evaluation

The evaluators (teachers, board functionaries) generally confine themselves to the intricacies of the process of evaluation of theory and practicals and forget the board educational perception, the goal and principal objectives of the educational programme aimed at human resource development. This negates the very purpose

of evaluation. In VEP, the evaluators must concern themselves with the above as well as national needs of quality control of skilled manpower development (SMPD).

Developmental Needs and Educational Perception of VEP

The goal of vocational education is to fulfil manpower requirement for national development and social requirement of employment. It is the vocationally competent skilled manpower that produces goods, provides services and makes the country prosperous.

The VEP, to realise the above goal, aims to develop skilled manpower within a broad perception of vocational education which not only focuses attention to *train* the students for acquisition of knowledge, skill and personality traits relating to specific vocation, but, also aims to *educate* them in a manner that it should lead to

- an understanding of the environment and sustainable development;
- the comprehension of the social, political and environmental implications of scientific and technological change;
- the establishment of a new relationship between education, working life and the community as a whole; and
- to appreciate vocational education as a part of a system of life-long education adapted to the needs and development of one's self, one's family, one's society and the nation.

The curriculum design as recommended at the national level aims to translate the above broad perception of VEP and attempts to develop the desired level of competency in vocational graduates in their respective areas of specialisation and prepare them for employment, either self or wage.

Need for Quality Control

Today, when the country is entering into the globalisation process of market economy, goods and services of highest quality in international standard are needed not only to succeed in a highly competitive world market but also to retain economic freedom, to survive as a sovereign state and to progress as a prosperous, developed nation. In this context, it should be borne in mind that during the four decades of post-World War development, the global market trend indicates a gradual erosion of values of Indian goods in which it was even having monopoly. Even in Indian market Indians prefer outside goods to their own. Generation of goods of global standard with a firm commitment towards a future sustainable world development requires quality control of utmost honesty and rigour in skilled manpower development (SMPD).

Proper evaluation measures during and after curricular transaction can ensure (i) standardisation of VEP and SMPD of desired competency, (ii) cognizance of the importance of SMP by public and private industries as well as local and global market economy, and (iii) elimination of spurious and substandard SMPD by unauthorised bodies.

Purpose of Evaluation

The purpose of evaluation in VEP has to serve the specific needs at three different levels — national, state and institutional. The main purposes of evaluation are :

- To measure the achievement of vocational students in terms of the national aims and objectives of VEP.
- To evaluate students' achievement that will serve as a basis for determining grade for administrative purposes.

- To evaluate the effectiveness of curricular transaction, diagnose students' weaknesses and provide data for remedial teaching

Evaluation Parameters

Area of Evaluation

In the vocational stream achievement of goal in psychomotor domain is of crucial significance compared to that of cognitive domain. But attainment of cognitive competencies is as important as that of psychomotor, because a paraprofessional uses both his brain and hand in all his activities. Besides, a paraprofessional's job requires him to deal always directly with human clientele needing his goods and/or services. So his attainment of competency in affective domain (personality traits/ social skill) is also very important.

Process Evaluation and Product Evaluation

The success of vocational graduates in job market very much depends on their attainment of mastery in skill competencies. The goods that they produce should attain appreciable finish, quality and marketability. But the evaluator may commit a blunder in judging the performance of a vocational student being misled by the final product without taking into consideration the process of parameter involved. The net gain of a good evaluation programme depends not only on finished product, but also on process related risks covered. A skilled worker who takes more time to produce an item, wastes more material, does not handle the tools and machine with proper care and thus reduces their life period, and exerts more effort in his work, can hardly succeed as an entrepreneur.

Therefore, the evaluator should take

the following parameters into consideration while measuring the performance of a vocational student.

(a) Process Evaluation

- (i) Economy of Time
- (ii) Economy in the use of Software (raw materials)
- (iii) Economy in the use of Hardware (tools and machines)
- (iv) Economy of Effort.

(b) Product Evaluation

- (i) Finish
- (ii) Quality
- (iii) Marketability (cost-effectiveness).

Evaluation of Personality Traits

The present status of evaluation in affective domain is next to nothing. This rather total omission of affective domain from the present scope of evaluation is a gross violation of the fundamental principle of human resource development. It is separating education from human values and turning education characterless. We should remember Gandhiji's dictum: *Education without character is a social sin*. Education without character is one of the seven social sins diagnosed by Mahatma Gandhi that afflict human society on account of which mankind suffers.

SEVEN SOCIAL SINS

1. Politics without Principles
2. Wealth without Work
3. Commerce without Morality
4. Education without Character
5. Science without Humanity
6. Pleasure without Conscience
7. Worship without Sacrifice

In the vocational field a selfish motive vis-a-vis the dignity of national honour can make all the difference in the quality of goods produced or services rendered. The

sanitary bandage imported by Australia from India that turns infectious, the heel of a pair of shoes presented by the Indian Embassy to an Indian student reading in Russia that gets detached within weeks of use and the Indian ready-made garment that turns inferior in quality after use compared to that of South Korea are examples of goods which could not have been produced by a skilled worker having human and national dignity.

During the training period, the supreme importance of personality traits in the vocational field should be emphasised, inculcated and evaluated. The attitudinal motto should be : My product is second to none anywhere in the world. *Excellence* and *perfection* should be the watchwords. Some of the traits which are of significance for inculcation and evaluation are :

Sense of Perfection	Dependability
Confidence	Commitment
Honesty/sincerity	Promptness
Punctuality	Innovativeness
Dignity of Labour	Initiative
Team Spirit	Drive
Leadership	Resourcefulness

Methods of Evaluation

Oral and written tests are adopted in evaluating knowledge and understanding. For evaluating skill components, observation and performance tests are the only suitable methods. Personality traits can be evaluated through a continuous process of observation.

Tools of Evaluation

Tools of evaluation should be so designed as to leave little chance to the evaluator to operate subjectively. Tools should be specific, precise, clear, relevant and without a trace of ambiguity.

Tools for Oral and Written Tests

Test items are the tools for oral and written tests. Test items should be objective based requiring one word, one sentence, one paragraph, or rarely more than one paragraph answer. Test items may be supply type or choice or selection type.

SUPPLY TYPE	SELECTION TYPE
Terminological Type	Multiple Choice Type
Completion Type	Matching Type
Very Short Answer Type	True-False Type
Short Answer Type	
Essay Type	

Tools for Skill Evaluation

Subjectivity in evaluation during observation, performance tests, etc., can be avoided by the application of the appropriate tools.

METHODS	TOOLS
Observation	Observation schedules
Performance Tests	Check lists
	Rating scales

Checklist: It is a sequentially arranged list of salient features or events. While developing a checklist for a performance to be evaluated each feature or event in the sequence should be given value points as per its significance.

Rating Scale: Rating can be on 3 or 5 points scale as per requirement. It differs from checklist in that it helps to evaluate such traits which cannot be assessed on quantitative basis, i.e. these occur as a continuous/varying in a range of degrees.

While checklist and rating scale both can be used to measure process and product skills, checklist is most suitable for process evaluation and rating scale for product evaluation.

Tools for Evaluation of (Personality) Traits

Evaluation of personality traits is not a

one-time affair. It is a continuous process. Traits manifest spontaneously which can be observed. Specific traits absent in students, but needed for inculcation can become a habit after a long time with repeated exposure to the concerned traits-involved activities. Evaluation Tools most relevant for the purpose are observation schedules and rating scales.

Practical Record : An Essential Tool

Faithful day-to-day recording of practical activities by the student with attached response sheets of checklist and rating scale for self evaluation, teacher's evaluation and community's evaluation serve as an essential tool for comprehensive evaluation of vocational competencies attained by the students in all the three domains—cognitive, psychomotor and affective. It is a tool for both formative and summative evaluation.

Problems of Evaluation of Vocational Competencies

Neglected Field

Evaluation of psychomotor skills, in general, has remained a neglected field. Not much attention of the evaluators has been attracted to improve skill testing. The urgency of quality control in vocational skill demands that R&D organisation in vocational areas at State and national level as well as vocational teachers at school level will have to do a lot of ground work in this area.

Skill evaluation may be a neglected field but the problem is much more grave in the area of evaluation of personality traits, which is totally absent. It is a much talked about affair at all levels but conspicuous by its absence in practice.

Lacunae in Board Evaluation

No Board of School Education in the country has an experience in evaluation of vocational competencies. At best they conduct practical examination in science subjects which is a one-time affair. The same procedure of testing is followed by the Boards in the examination of vocational stream students thus doing grave injustice in terms of quality control. A one-time single final practical examination where only a few skills can be tested and on the basis of which result is declared cannot determine accurately as to what extent the students have attained the whole range of vocational competencies during two years of curricular exposure.

Lacunae in Internal Evaluation at School Level

Today teachers, in general, have lost their earlier respectability and as a result school evaluation is not acceptable to the society. Day-to-day practical activities are neither recorded faithfully nor assessed accurately. Internal evaluation is based on a few periodical test-cum-assignments. Teachers have no competence in preparing tools of evaluation. So in internal evaluation subjectivity plays a big role.

Lacunae in Evaluation of OJT

Most of the implementing States do not expose the vocational students in many vocational subjects to On-the-Job Training (OJT) which is an important curricular transaction component. Wherever OJT is conducted evaluation aspect is ignored. No tools of evaluation for OJT can be developed earlier because tools will be specific to activities conducted in each OJT programme which will vary from site to site. Besides, neither the vocational teacher

nor the bench supervisor is trained to prepare evaluation tools for specific purposes

Towards Effective Evaluation

Scheme of Comprehensive Evaluation

The nature of vocational education and training programme is such that the existing external evaluation system alone cannot properly evaluate the attainment of vocational competencies by the students acquired during two years of exposure in curricular transaction organised at +2 institution, collaborative institution and on-the-job training (OJT). Evaluation should be continuous and comprehensive, comprising of both internal and external component.

The following General Scheme of Comprehensive Evaluation was outlined in a National Workshop held at Pune in 1992.

General Scheme of Comprehensive Evaluation
(Figures in Per cent)

Component	Weightage	Internal Evaluation Institutional Periodic Tests/ Assignment	OJT	External Evaluation	Total
Language(s)	15			15	15
GFC	15	5		10	15
Vocational					
Theory	35	10		25	35
Practice	35	10	10	15	35
Total	100	25	10	65	100

School Has to Play a Dominant Role

The primary and the sole responsibility of imparting vocational competencies to the students is vested with the school. The curricular transaction takes place either in the school or in the collaborative institu-

tion and also during OJT, under the overall supervision of the school. The vocational teacher keeps in constant touch with the students for the entire duration of the course involving themselves in the process of all activities involved in curricular transaction taking place in the school, in the collaborative institution(s) and during OJT. So the vocational teacher is the key person in VEP implementation for carrying out *formative and summative evaluation* of the vocational students, with the needed assistance of the school authority and District Vocational Education Office. School has to ensure the following:

- Preparation of a Year Planner with day-to-day programme schedule of curriculum transaction.
- Preparation of evaluation tools for evaluation of knowledge skill and personality traits for each and every practical activity.
- Cooperation and participation of concerned experts of collaborative institutions and site supervisor OJT in the evaluation process of the students for the collaborative and OJT phases of curricular transaction respectively.
- A meticulous and sincere evaluation of vocational competencies attained by the students can ensure quality product. It is not the certificate of the Board but the 'Stamp of the School', that should command respect through the recognition and appreciation of the quality of work of the vocational graduates by the society.

Training of Teachers and Preparation of Evaluation Tools and Item Banks

Vocational teachers should be trained to develop evaluation tools and Item Banks for evaluation of vocational competencies. They

should be specifically trained as to how to develop observation schedules, checklists and rating scales to measure process skills, product skills and personality traits.

During the training programme of vocational teachers, specific time slot should be allotted first to train them how to prepare evaluation tools. Then each trainee should be assigned a specific unit to develop activity-wise tools for evaluation of process and product, skills and personality traits. These evaluation tools should be presented by each teacher during a

training session, specifically allotted for the purpose, discussed and finalised. In this way evaluation tools covering the entire course can be prepared.

School Boards can arrange specific training-cum-workshop programmes for each vocational course and develop Evaluation and Item Banks, as well as guidelines for evaluation of vocational competencies.

In this national venture of human resource development effort from any quarter is welcome

Format of Revaluation of Vocational Competencies of Students

<i>Area of Evaluation</i>	<i>Methods of Evaluation</i>	<i>Tools / Techniques of Evaluation</i>
<i>Cognitive Domain</i>		
Knowledge	Oral Test	Test items
Understanding	Written Test	Written Assignment
<i>Psychomotor Domain</i>		
Process Evaluation	Observation	Rating Scales/
1. Economy of Time	Performance	Checklists for
2. Economy in use of Software (Raw Mat)	Test	—Self-Evaluation
3. Economy in use of Hardware (Machine)		—Teacher's Evaluation
4. Economy of Effort		—Community's Evaluation
		—Practical Record
Product Evaluation		
1. Finish		
2. Quality		
3. Marketability		
4. Cost-effectiveness		
<i>Affective Domain</i>	Observation	Rating Scales/
1. Sense of Perfection		Checklists for
2. Confidence		—Self-Evaluation
3. Honesty/Sincerity		—Teacher's Evaluation
4. Punctuality		—Community's Evaluation
5. Dependability		—Cumulative Record
6. Commitment		
7. Promptness		
8. Innovativeness		
9. Drive		
10. Team Spirit		
11. Leadership		
12. Dignity of Labour		
13. Initiative		
14. Resourcefulness		

Learning Through Games

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Effective learning requires involvement of students in the teaching-learning process. This principle has led to the play-way method wherein games and activities become the main vehicles of curriculum transaction and learning takes place in a tension-free atmosphere. In the paper that follows the author describes the play-way method, its specific features, advantages and disadvantages. In his opinion, this method seems to have a bright future in progressive schools.

PEDAGOGUES have always been on the lookout for effective methods of teaching. Oratory at the school stage does not occupy a front seat in the series of modern methods of teaching. The search is on developing methods that tend to involve students in the teaching-learning process. The three main characteristic features of the progressive methods of teaching are the students involvement, maintenance of their interest throughout the teaching-learning process and effective learning on the part of students. The emphasis on these three features inspired many pedagogues to develop games for teaching purposes.

Playing is an activity that every human being longs for. The instinct of playing is more intense at the childhood and adolescent stages. Learning by playing is

common at the elementary stage of education in many academically advanced countries, and some successful attempts have been made at secondary and college levels also.

Till early 1940s the belief had been that playway method has its place in primary and pre-primary schools only. From mid-1960s many successful attempts have been made in developing and teaching through games, not only at senior school level but also at college and university stages. The teacher-educators in U.S.A. started developing games for the senior students from mid-1960s. This trend was followed in the United Kingdom from early 1970s and by early 1980s, most developed countries had a rapidly growing literature on the subject. Playway method

has become so popular in some advanced countries that the teachers teaching through this method find that their classes are beaming with activity and learning taking place in a tension-free atmosphere. Many associations have emerged where members of national and international levels share their experience of developing and trying out games for teaching purposes. Though some preliminary efforts have been made in India in this direction, a systematic beginning at the secondary school level is yet to be made.

Concept of Playway Method

Playway method implies that teacher will organise a 'play', students will participate in it and the outcome will be learning of the desired content or the trait to be developed in the students. 'Play' is not confined to a pure game—outdoor or indoor. It encompasses the following three types:

- (i) Pure Games
- (ii) Simulation Games, and
- (iii) Role-Play

Pure Games

Pure games are played either outdoor or indoor. Some well-known outdoor games are cricket, football, hockey, etc., and chess, table-tennis, playing-card, etc. are examples of indoor games.

Pure games are played mainly for recreation as they cater to the instinctive requirement of human beings. Different games are played in different ways, but they have the following common features :

- i) *One or more players* Every game based on its nature and rules requires the involvement of a fixed number of players. Football and hockey, for example, may be played when there are eleven members in each team, whereas

billiards and golf may be played by one player at a time.

- (ii) *Rules* : Each game is governed by certain set of rules. These rules determine a sequence of activities and put constraints upon the actions of players. It is because of rules that the games are systematised and the players try to show their skills within the prescribed system.
- (iii) *Competition* : Competition is an inherent feature in almost all the games. It may be against other players, the player's previous best score or against nature. It is the spirit of competition due to which the players want to sharpen their skills to the maximum possible level. Besides, this also strengthens the willpower of the players to achieve their objective.
- (iv) *Cooperation* : If there are two or more players in a team they tend to cooperate to achieve the common objective.
- (v) *Objective* : Every game has a definite objective. Though the sportsman spirit lies in the fact that every game should be played for the sake of the game alone, the implication of this is that all the players should play a fair game and the defeat or victory should not result in chronic rivalries. The fact remains that games are played wherein each player or team wants to win.

Simulation Games

A simulation is a working model of reality, whereas a simulation game combines the feature of a game with those of simulation. Thus a simulation game encompasses one or more players, definite rules, competition, cooperation, goal, as also the critical features of reality. Megarry writes that when the real-life situation to be

simulated is competitive, simulation games tend to rise naturally.

Role-Play

Role-play means playing the role of others. The player puts himself/herself in a different identity and is expected to enact the scripted role, as the real person would have done it.

Playway methods or teaching through games means to teach through any of the above kinds of play. All the three have rich potential of communication and the students learn the content and develop many constructive traits willingly and with zeal.

Features of Learning through Play

Any form of play—simulation or gaming or role playing—is vital for learning because it encompasses the following features:

- (i) *Active Participation* : Any progressive method of teaching would ask for maximum involvement of the students. From students' participation point of view, play-way method can be put in the front line of the progressive methods. Students learn by playing—may it be an indoor or outdoor game or a spontaneous simulation game or a pre-determined role-play.
- (ii) *Instinctive Motivator* : Any form of play is an instinctive urge of human beings and proves a potent motivator for students. This tendency can be suitably harnessed for instructional purposes.
- (iii) *Performance leading to Conceptualisation* : James S. Coleman writes that 'games and simulations follow ability to perform rather than preceding it'. When students learn by playing, they appreciate the concepts which strengthen in their mind more

vividly than by learning the same by the traditional methods, i.e. transmission of information by teacher or books.

- (iv) *Learning through the Development of Traits* : Another feature of play is that it proves traits that are not always in-born, but can be developed and strengthened also. When the traits are displayed through play, some learning inevitably takes place.
- (v) *Meaningfulness of the Real World Activities* : Different types of play result in the learning of various aspects of education, viz. the development of personality, content learning, etc. A further implication of this is that play leads to playing of better roles in the real life situations.
- (vi) *Comprehension of the Inexplicable Action* : Inexplicable actions are those which one does not experience. Such actions may be very rare in one's life, but we can have the taste of such experiences in different types of play.
- (vii) *Learning Results as a By-Product* : The direct purpose of games and simulation may be entertainment or a pastime. If properly channelised, it results in the desired learning.
- (viii) *Societary Practices through School Epitome* : School is the appropriate place where students should be prepared for an ideal society. Direct instructional practices are inadequate for such a preparation. Role playing and simulated situations may prove effective media for societal training.

Planning for Play

There is no hard and fast rule for organising a play. However, some guidelines may be required for the beginners. The following steps may systematise

any type of play being undertaken .

- (i) *Objectives to be Accomplished* . The teacher should precisely know the objectives to be accomplished through the play. A behavioural description of the objectives may give better results.
- (ii) *Identifying the Play* . The formulation of objectives facilitates the teacher's task in choosing the type of play, as also its specific item. Once the specific play has been identified or developed, teacher should proceed to undertake the remaining steps.
- (iii) *Preparation* . The teacher should be aware of the rules of the play. The number of participants and their respective roles, equipment and material required, arrangement of furniture, etc. In the absence of these requirements, the desired objectives may not be achieved.
- (iv) *Unfolding Session* : Under this step, the play and its rules are introduced to the target group. Just verbal exposition of the rules is not adequate. A short demonstration along with verbal explanation proves more effective. Many computer-based games have the features of built-in demonstration sequence.
- (v) *Assigning Roles* . Teachers should allocate the roles in such a way that the play activity goes on smoothly till it is properly concluded. Roles may be rotated for complete understanding of the activity.
- (vi) *Observers* . Those who for some or the other reason, do not actively participate in the play activity, may be recruited as observers. Research studies have shown that such observers

also equally learn

- (vii) *Intervention* : Teacher should not unnecessarily intervene, when the exercise is in progress. As a matter of policy, feedback should be given after the activity is over. However, there may be some such situations where intervention is necessary, otherwise the whole exercise may become futile.
- (viii) *Debriefing* . Under this step, a discussion takes place and inferences are drawn. Students are asked to generalise the outcomes of the exercise. Teacher matches the objectives with the outcomes. If the results are not commensurate with the expectations, the reasons for deviations are found out and the remedial measures are taken.

Appraisal of the Playway Method

It is an established belief that best learning takes place when the learners are fully motivated to learn and the learning atmosphere is congenial. These conditions are readily fulfilled if teaching is to take place through playway method. This method is known for the advantages it bestows.

Advantages

- (i) *Motivation*: This method provides high level of motivation to the students. As has already been pointed out a game is an instinctive motivator for the students and they have a natural urge to play. A properly developed game becomes a source of learning for the students.
- (ii) *Effective Learning* . As the students engage themselves in the games willingly, whatever they learn through games is more effective than what

they learn through traditional methods. Students' involvement is a prerequisite for every sound learning.

- (iii) *Retention* Varments comments that "it is often difficult to stop the activity, and discussions about the outcome can continue for days or even weeks afterwards. This leads, therefore, to a high degree of retention of what has been learnt"
- (iv) *Teacher as a Facilitator* . Teacher, now, is expected to be a facilitator, rather than a spoon-feeder. He is expected to facilitate learning and the students are supposed to learn themselves by their own efforts and involvement. In the playway method, they play and learn and the teacher simply develops the game and provides other experts so that the game may be played smoothly
- (v) *All-round Development Possible* : The traditional methods of teaching cater more to cognitive learning, whereas the playway method looks after the affective and psychomotor aspects also. While playing, students establish many types of relationships and thereby they learn how to coordinate and cooperate in order to accomplish the desired objectives.
- (vi) *Valuable Experiences* : Coleman writes that "Simulations often place an individual in a role he will never have in real life : a role in a simulation of an historical episode, or a role as a Congressman or labour negotiator or business owner "
- (vii) *Cultivation of Social Relations* . As mentioned earlier in this article, students interact among themselves while playing. They prolong their discussions even after the game has

been played. They come close to one another and their social relations get strengthened.

Limitations

Playway method is generally criticised on the basis of the following points.

- (i) *Time consuming* . It is often said more time is required first for developing games and then for playing it. It should, however, be remembered that any good accomplishment undergoes a lot of time and effort. It is true with Learning through Games also. Once a good game has been developed, it may be possible to organise it and transfer desired learning within reasonable time
- (ii) *Imbalance in Students' Roles* . It has been found that all the students are not given equitable roles in the games and some of them remain mere observers. Some people express their doubt by the feeling that all the students of a class may not be able to learn equally well. The spokesmen of this method do not agree with this allegation. They say that the students, playing small roles, also have the knowledge of bigger roles being played by their classmates. Some research studies have shown that even the observers learn equally well
- (iii) *Lack of Trained Teachers* : The teachers, having knowledge of developing games, are scanty. Only the trained teachers can develop games for educational purposes. This can be made possible by including the playway method in the curricula of teachers' training institutes and by organising inservice

workshops for training the Secondary School teachers in this field.

- (iv) *Lack of Study Material* : There is a dearth of study material on educational games and simulations. As the idea of learning through games catches the attention of the authors of pedagogical books and articles and as the games developed for instructional purposes are successfully tried

out, such a shortage will disappear and this method will find due place in secondary schools.

The justification and solution given for the above limitations show that the necessary steps may be taken to introduce, develop, try out and use games for instructional purposes. This method seems to have a bright future in progressive schools.

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The Technique of Listening in the Helping Professions

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Listening is one of the most frequent activities in which people engage. Everyone realises the importance of better communication in the present world. Various surveys have shown that people spend much time in listening rather than talking, speaking, writing and reading. In this paper, an effort has been made to take a close look at the technique of listening. The author is of the view that professionals like counsellors, psychologists, teachers, social workers, doctors and nurses, etc., must master this technique if they are to succeed in their various fields. The purpose of this paper is to enable participants become better listeners by taking note of some important information about the subject.

LISTENING is considered to be the most frequent type of communication behaviour. Today, everyone acknowledges the importance of better communication. The experience of not being listened to when one is speaking to another person is all too common. It was realised as early as in 1926, when Paul Rankin surveyed a group of businessmen to find out the percentage of time they spent speaking, reading, writing and listening, that his subjects spent more time listening than in any other communication activity. They devoted 42 per cent of their time to it (Rankin, 1926). Over the past sixty years, research has revealed that the college students spend

an average of 14 per cent of their communication time on writing, 16 per cent speaking, 17 per cent reading and as much as 53 per cent listening (Barker, et al 1981).

Listening, therefore, is one of the most frequent activities in which people engage. However, experience has also shown that much of the listening that we and others do is not always quite effective. Misunderstandings do occur. The listener sometimes becomes bored and feigns attention while his mind wanders. At times people even engage in a battle of interruptions, where each person speaks without hearing the other person's ideas. Some poor listening may be inevitable. But, in certain cases

we can be better receivers by learning a few basic listening skills. The purpose of this paper is to enable participants become better listeners by taking note of some important information about the subject. Efforts are being made to look at common misconceptions about listening, essential components of the listening process; common types of listening failures; why many people don't listen effectively and the characteristics of different types of the listening process.

Misconceptions about Listening

Listening and hearing are not the same thing. Some persons may think, erroneously though, that these two words are interchangeable. Hearing is defined as a process whereby sound waves strike the eardrum and cause vibrations that are transmitted to the brain. Listening occurs when the brain reconstructs these electrochemical impulses into a representation of the original sound and then gives them meaning. Except for illness, injury or earplugs, hearing cannot be stopped. A sound ear will pick up sound waves and transmit them immediately to the brain, whether a person wants them or not.

Listening is not so automatic. Many times we hear but do not listen. At other times we deliberately do not listen. Rather than pay attention to words or other sounds, we avoid them. Also one can stop listening if one finds a subject unimportant or uninteresting. Examples include boring stories, some TV commercials and nagging complaints. In certain cases, one can even believe one is listening when in fact one is merely hearing. Sometimes, for instance, a person may feel that he had "heard it all before". In such a situation, a person might claim he was listening, when

in fact he had closed his mental doors to new information. If a person confuses listening with hearing, he is actually fooling himself into thinking that he is understanding others, when he is in fact, simply receiving sounds. True listening therefore involves a lot more than the passive act of hearing (Adler & Rodman, 1988).

In another sense, listening is not a natural process. That is, it is not natural activity like breathing or laughing. If a person says, "What's all this fuss about listening. I have been listening since I was a child", it will be understandable. This attitude is primarily due to lack of attention. Most schools devote to listening as compared with other communication skills, like reading and writing which are carefully taught from Kindergarten to University Level. (I have not yet come across any school that has started instruction in listening)

Listening is not a passive activity. It requires a mental effort by the receiver. The most familiar examples in an environment include students listening to the lecturer, or viewers paying close attention to a television programme. It was discovered in a study and reported in *San Francisco Sunday Examiner and Chronicle* that about 20 per cent of the seeming bright-eyed students in a lecture were pursuing erotic thoughts, 20 per cent reminiscing about something; only 20 per cent were paying attention to the lecture; 12 per cent were actually listening and the remaining 18 per cent were worrying, daydreaming, thinking about lunch or religion. The speaker may send vague or incorrect message which can cause the receiver to interpret the words in a manner that does not match the speaker's ideas. When the receiver says, "Wait a minute, I am a bit

confused", that 'bit' may be an understatement. The way some messages are given is bound to get the receivers confused. The assumption that one understands another person's words is not always a sure thing.

The Components of Listening

According to Barker (1981), listening has four components : hearing, attending, understanding and remembering. Hearing is the physiological aspect of listening. It is the non-selective process of sound waves impinging on the ear and the ear responding to those waves that fall within a certain frequency range and are sufficiently loud (Adler & Rodman, 1988). Hearing can be influenced by background noise, auditory fatigue, a temporary loss of hearing caused by continuous exposure to the same tone or loudness.

Listening starts as a physiological process but quickly stops as a psychological aspect of attending. Attending involves an unconscious process of focusing on what was heard. The listener's needs, wants, desires, and interests often determine what is attended to. For example, if a person is hungry he is more likely to attend to the message about restaurants in the neighbourhood than another person who isn't feeling that need.

Understanding involves interpreting a given message. This is facilitated by the listener recognising the grammatical rules used to create that message and knowing the source of the message, to decide whether the person giving the message is sincere, friendly, prone to like and so on. Also, the social context of the message will enable the listener to decide what weight to place on a given message. Understanding further depends on the listener's ability to organise the information he hears

into a recognisable form.

Research has established that people remember only about half of what they hear immediately after hearing it (Nichols, 1948). The ability to recall information is a function of factors like the number of times the information is heard, how much information there is to store in the brain and whether the information may be "rehearsed" or not

Reasons for Poor Listening

For several reasons, it is impossible to listen all the time. Listening effectively is a hard work. It takes a great deal of effort to give full attention to any speaker. When one listens to a speaker the heart rate quickens, respiration increases and body temperature rises (Nichols, 1969). These changes are similar to the body's reaction to real physical effort.

The next reason for poor listening is caused by what Adler and Rodman (1988) refer to as "message overload". The amount of speech a person encounters everyday makes careful listening to everything we hear impossible. One-third of the time we stay awake is spent listening to verbal messages from teachers, co-workers, friends, family, salespeople and total strangers. It then means that we spend five hours or more a day listening to various types of people. As a result of this pressure on the listener from various sources, he has to let his attention wander at times.

For physiological reasons, listening carefully is made difficult. It has been estimated that we are capable of understanding speech at rates up to 300 words per minute (Orr, 1967). The average person speaks between one hundred and one hundred and forty words per minute. So, the listener has a good deal of mental spare

time to spend while someone is speaking. Whether or not the listener uses this spare time in ways that relate to the speaker's ideas, is another matter. Such spare time may be used for day dreaming, thinking about personal interests or thinking all sort of unrelated issues.

Sometimes the listener is wrapped up in personal matters which are of more immediate importance to him than the messages the speaker is sending. Thus a psychological noise may set in to disrupt the listener's attention. It will be difficult for a person to listen attentively to a speaker when he is anticipating an upcoming examination, yet he still has to appear to listen 'politely' to the speaker.

The person's listening ability may be affected by physiological hearing problems. A hearing loss can be undetected and untreated. In such a case the person with the defect and even the speaker can become frustrated at the ineffective communication which results.

Another reason for poor listening includes false assumptions. For instance, when the subject sounds familiar, the listener may think that he had 'heard it before' when in fact the speaker is actually giving fresh information. Related to this is the mistake people often make in assuming that the subject is unimportant and then stop paying attention when they ought to be listening very carefully.

Besides these, we live in a world that presents various distractions which make it rather difficult to pay attention to others. Heavy traffic noise, wild music, other people's speech compete to interfere with our efforts to listen attentively.

Types of Listening

Various types of listening patterns exist

with each pattern requiring a different approach. Informational listening is the approach to take when the listener wants to understand another person. The informational listener endeavours to receive the same thoughts that the other person is trying to convey. Situations that may call for informational listening include listening to the lecturer explain important issues in class, a description of an important equipment the listener intends to buy, learning about one's family history from the tales of a relative and so on. In order to benefit from informational listening, the listener is advised never to judge the message prematurely, particularly if the speaker's ideas conflict with his own. He should look for key ideas, ask questions and paraphrase whenever it is possible to do so.

In evaluative listening, the goal is to judge, that is, either to accept or reject an idea. Evaluative listening situation occurs, for instance, when the speaker is trying to persuade the listener to accept a belief, buy a certain product or behave in a certain way. In this case the listener should first listen for information before evaluating. He should also evaluate the speaker's credibility and examine his evidence and his emotional appeals.

The main purpose of empathic listening is to help the speaker solve a problem. The problem the speaker wishes to solve may not be too great. The speaker may just be looking for a reliable listener to unburden his heart, as it were. If advice is required, the listener should ensure that three conditions are met before offering one. Such advice should be correct. The listener should also be quite certain that the person seeking the advice is truly ready to accept it. Finally, he should be

certain that the person seeking advice will not blame the giver if the advice does not work

It should be noted that in empathic listening, one listens to words, feelings as well as thoughts. In some cases the speaker's feelings can be as important as the thoughts being expressed. Apart from this, most speakers often fail to mention their feelings at all. If the listener just focuses on the rational parts of the message only, he shall have ignored the most fundamental parts of a problem. In empathic listening, the listener should avoid being too judgmental. Judging responses from the listener rarely help the situation.

Toward Active Listening in the Helping Relationship

Active listening and attending to non-verbal behaviour are essential to enable the helper understand what the client actually means. The helping relationship is well enhanced if the helper focuses attention on the client and makes a deliberate effort to listen attentively to and understand the client. According to Steil (1980), good and active listening is more than hearing what is said :

There are three other important components; interpretation which leads to understanding or misunderstanding; evaluation, which involves weighing the information and deciding how to use it; and finally, responding, based on what was heard, understood and evaluated.

In dealing with the client, the effective helper does most of the following (Hutchins & Cole, 1986).

- Listens carefully to what the client says and how it is said.
- Avoids interrupting and allows the

client to complete sentences and ideas.

- Uses silence to encourage the client to continue talking, thus giving the client time (and space) to get out thoughts and feelings that may be difficult for that client to talk about, (particularly if the client has never before expressed them to another person).
- Asks questions to clarify the client's meaning.
- Asks questions to get important details: questions of what, where, when, how, under what circumstances, how often etc., as need arises
- Helps the client systematically explore relevant content
- Notes similarities and incongruities between what is said (verbal content) and how it is said (non-verbal content) gestures, facial expressions, body language, eye contact etc)
- Reflects similarities and discrepancies between what the client says (thoughts), how the client says it (feelings) and what the client does (actions).
- Elicits feedback from the client to check for and ensure accuracy of the helper's perception of the client

Every other aspect of the helping relationship is built on active listening. It is during that process that the helper understands the client. It should be further stressed that there is a critical link between what is said and how it is said. Non-verbal behaviour mainly refers to behaviour other than the specific words the client uses. Words relate to what is said, but nearly everything else relates to how it is said. According to Mehrabian (1971), most people pick up only about 7% of the message from what people say, 38% is picked up from the vocal aspects of their communication (tone of voice, volume, etc.,

but not the actual words used) and 55% from other non-verbal aspects of their communication (for example, body language including eye contact, facial expression, gestures, posture and overall body movement).

Conclusion

In this paper, an effort has been made to

take a close look at the technique of listening Professionals like Counsellors, Psychologists, Teachers, Social Workers, Doctors and Nurses, among others must master this technique if they are to succeed in their various fields. It is neither a passive nor a natural process. It is an active process which involves hearing, attending, understanding and remembering.

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Evaluation of NFE Children at the Primary Stage

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It is generally observed that the method of evaluation determines the method of teaching at almost every stage of education. It is for this reason that examinations have come under severe criticism in our educational system. Describing the nature of evaluation in non-formal education briefly the author, in this paper, presents a scheme of evaluation which is to be continuous and competencies based. The emphasis here is on acquisition of competencies by the learner rather than on memorising information.

NON-FORMAL Education (NFE) in India has been visualised as a strategy of achieving universal Elementary Education. Ambasht (1988) has operationally defined it as "planned and deliberate educational activities/programmes for out of school children of 6-14 age group, leading to achievement of learning outcomes comparable to that of formal elementary schools". The stress here is the achievement of certain learning outcomes, which are determined by the 'comparability factor' with those of the formal schools. Hence, they have to be, of necessity, in terms of competencies. Knowledge component becomes only a tool in achievement of the competencies,

and need not be over emphasised. Again, it essentially leaves enough flexibility in methodology of achieving these competencies, which is the spirit of Non-Formal Education.

Nature of Evaluation in NFE

A major factor is the achievement of the competencies to a level where it can be used with proficiency. Therefore, time frame is of a secondary importance. Thus the level of mastery in using these competencies is the basic criteria that needs to be evaluated.

Certain factors that emerge out of these considerations, for the evaluation of the learners of this system, are essentially

the following.

- (a) Evaluating the children on the criteria of achievement of competency. The term competency implies "the use of the 'skills' acquired in a competent manner", which means effectively. Thus the children must be able to use these 'skills' effectively and efficiently.
- (b) The time taken in achieving the skill to this level has not been rigidly prescribed. Acquisition of the competency is of major concern. It is not important that the learner acquires it in specific period of time. It is also essential that he acquires them to a level from which he can operate effectively. For example, it may happen that learner 'X' acquires it in, say two months, learner 'Y' in six months, learner 'Z' in one year. As long as he/she does not acquire it to the desired level, he/she should not move to the next competency, in the hierarchy of learning-levels. What is more important is that the 'skill' must be acquired upto that degree by which it can become a permanent asset with the learner. Also he/she should be able to use it in his daily life in varying situations.
- (c) Knowledge could be a means to acquire the competencies but may not remain an item for measurement specially for purposes of evaluation. Ultimately it is the acquisition of skill or the competencies that are to be evaluated.
- (d) This implies that the evaluation could be text-free, because competencies could be achieved through variety of texts or even without texts, not only this it could also be achieved by other means. These competencies could be

cognitive or non-cognitive in nature.

- (e) Evaluation has to be formative in nature throughout. If it becomes absolutely necessary to have a summative evaluation, it could be done only at the end of the primary level.

It would, therefore, be seen that certain untrodden path has to be struck in the area of NFE, if we really want to attain the goals of U.P.E. which is permanent and also to a great extent non-relapsable. Continuous and comprehensive evaluation has been advocated in the formal system but evaluation has been mostly concerned with evaluating the knowledge component, and less with the understanding, and practically not evaluating either application or skill acquisition.

Keeping this in view a scheme of Evaluation in NFE is proposed as under

Scheme of Evaluation in NFE

The scheme of evaluation has to consider the learning outcomes or competencies to be acquired. For the sake of clarity we give in the following pages an example of the proforma for evaluation of NFE children in some competencies related to language acquisition only. The competencies have been taken from the Minimum Levels of Learning (MLLs) issued by the Ministry of Human Resource Development, Government of India. These are only illustrative. It must be reiterated that these are being used to illustrate the approach. Similarly, there would be MLLs in other areas of learning viz Mathematics, Environmental Studies and non-cognitive aspects. The intention of this paper is to bring out the approach succinctly.

L A N G U A G E

Competencies		Listening					
Name of Learner							
		Listen with understanding simple familiar rhymes, poems, tales; conversation and dialogues in familiar situations; understanding oral request and instructions in familiar situations	Listen with understanding to unfamiliar songs and stories, understand conversation and dialogues in familiar situations, understand oral requests, instructions commands and questions in familiar situations	Listen with understanding to narrations, riddles and puzzles; understand dialogues and conversation in unfamiliar situations, understand oral instructions for playing games and performing simple experiments	Listen with understanding to simple speeches in familiar situations, understand dialogues and conversation in unfamiliar situations, understand series of oral instructions for performing an activity	Listen with understanding to recitation, plays and debates, understand instruction for performing a group activity	
1	2	3	4	5	6		
		Speaking					
		Repeat simple sentences correctly, recite simple rhymes, poems and songs in a group, answer simple questions; ask simple question	Pronounce all sounds of the language, recite poems and songs in group and individually, answer questions requiring long answer; seek information about familiar things	Speak with correct pronunciation, narrate simple known stories, describe familiar things and objects, ask complex questions	Speak without hesitation, recite with enunciation; describe the familiar things and objects; take part in simple classroom discussions	Speak fluently, make simple speeches; describe situations and events; take part in plays, debates and make formal announcements	
	7	8	9	10	11		

Reading			
Recognise common letters of alphabet in combination and singly, read print and writing on blackboard, flash card etc read aloud simple known words.	Recognise infrequent letters and conjunct letters; read smaller print, read aloud rhymes, poems, songs and simple stories	Read aloud road signs, hoardings and simple notices; read handwriting of children; read simple story books and other books	Read comic strips, posters and cartoons; read hand written letters, read children magazines
			Read simple figures, charts, maps etc ; read newspapers and other printed matter
12	13	14	15
			16
Writing			
Copy consonants, vowels, <i>matras</i> and conjunct letters, write (from dictation) consonants, vowels, <i>matras</i> and conjunct letters; write simple familiar words and simple sentences	Copy words and sentences; take simple dictation of known words, write simple guided composition	Make distinction of correct shape, sequences, spacing of letters and words, take dictation with unknown words, write guided composition using paragraphs and punctuations	Write clearly and neatly; take dictation with simple punctuation marks, write short free composition.
			Write with correct format, spacing etc., take dictation with all punctuation marks; write simple information letters, dialogues, short essays.
17	18	19	20
			21

Comprehension of Ideas (Through Listening and Reading)

Recall information given in spoken or written text; after listening or reading a text, be able to answer questions of 'who', 'when' and 'where'.	Recall sequence of events in a spoken or written text; after listening or reading a list, be able to answer questions of 'what' and 'how'.	Locate main ideas in a spoken or written text; after listening or reading a text be able to answer question 'why'.	Recognise cause effect relationship between ideas and events in a spoken or written text; after reading a text, be able to answer questions using 'because' and 'since'.	Make inferences from the information in a spoken or written text; after listening or reading a text, be able to answer the question using "if..then" and "if not.. then".
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Perception of Grammatical Structure (Functional Rules)

Become aware of similarities between words and basis of word ending	Become aware of similarities between words on the basis of word beginning, word-ending and word roots	Become aware of meaning, relationship of different meanings of one word.	Understand simple functional rules of sentence construction	Understand simple functional rules of points of speech
---------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------	-------------------------------------------------------------	--------------------------------------------------------

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Self-Learning			
Be able to use simple picture dictionary where available	Be able to use simple picture encyclopaedia where available.	Be able to use children's illustrated dictionary where available	Be able to use junior encyclopaedia where available
32	33	34	35
			36

Language Use	Language Use	Language Use	Vocabulary Control	Vocabulary Control
Understand and use simple polite formula.	Speak politely, be attentive while listening.	Take turns while speaking in group	Be able to acquire reading comprehensive vocabulary of approximately 1500 words	Be able to acquire reading comprehension vocabulary of approximately 2000 words
37	38	39	40	41

Vocabulary Control	Vocabulary Control	Vocabulary Control	Vocabulary Control
Be able to acquire reading comprehension of approximately 3000 words.	Be able to acquire reading comprehension of approximately 4000 words.	Be able to acquire reading comprehensive of approximately 5000 words	Be able to acquire reading comprehensive of approximately 5000 words
42	43	44	

- to be able to write neatly, with logical sequence and creativity
- to be able to comprehend ideas through listening and reading
- to be able to use grammar functionally in various contexts

At the primary stage, ELT becomes a onerous task for the English teacher, faced with the tremendous responsibility of ensuring that the MLL (Minimum Levels of Learning) are achieved. More often than not, she is faced with young learners who are first generation learners of English. In such a situation, instructional materials only in the form of textbooks often proves to be inadequate, in terms of the expected outcomes of language learning. Secondly, it may happen that inspite of infrastructural facilities, the grounding in the teacher training component of English teachers is inadequate. The multilingual situation of the Indian sub-continent often proves a bane in ELT situations, where regional linguistic interference in English language mars the phonetic purity that is expected from a teacher of English. This in turn gets transmitted to the learners. In order to correct and improve the situation, certain standardized audio support materials need to be developed that would form a parallel teaching material for reinforcement of textbook instructional items.

In teaching sequence, listening and speaking skills are given priority to reading and writing, which though having tremendous relevance to the learning process, come subsequently, nevertheless audio-lingual approach to language teaching would enable the teacher to teach the target language without reference to the mother-tongue. Mere instructional materials in the form of visual symbols has a lesser appeal to the learner as this experience

becomes too abstract. Communication that has the maximum appeal at the primary level, is the oral-aural one, as it concretises the abstract instructional input. At the elementary level, and more so in the primary level, the stress of pedagogical planning for teaching second language needs to envisage an audiolingual approach for greater internalization of instructional materials. An audio support to the instructional materials would strike a greater response in the learner at this level. Graphic stimulus often becomes tedious for the learner of a second language at the primary level for an interest in graphic representation presupposes a scholastic maturity of a more refined nature.

Audio support to textbook materials is based on the psychology of habituation and conditioning without intervention of intellectual analysis, that is too complex for the target learner. Emphasis at this level needs to be more on an active and simple practice. The psychological make-up of a child is often based on a highly mimetic response to various confronting stimuli. A textbook provides the basic input of instructional items. This material can be reinforced through audio media, ensuring deeper memory traces. This pedagogy is based on the mimetic theory of mimicry, where initiative repetition would make second language learning less of a mental burden. The pattern drills through audio media brings about greater language facility, an unconscious memorization of phonetic and grammatical rules guiding language acquisition, besides an insight into metalinguistic variations underlying speech in the target language.

To ensure an incisive, simple (though in no way simplistic) and clear audio material, that is commensurate with the

textbook input, a careful academic script is an indispensable prerequisite. Whereas, on the one hand, the technical aspect has to be of impeccable perfection, it has to be bolstered with an academic script that make it a tight and compact whole. Writing a script for an audio piece, especially for the primary level, presents difficulties that are multiple and multigraded. On the theoretical side, where the format of the script is prepared, the objectives and the content outline have to be crystal-clear and pre-determined, keeping the target group in mind. Moreover, the entire body of the script has to be couched in a linguistic format that has to be commensurate with the mental and scholastic level of the target learner. Lexical items have to be identified and have to be simple and the spacing of the sentences far apart to ensure maximum internalization and retention. The lesson to be taught (through the audio media) should at first be read out, with the relevant stress on the crucial items that have to be highlighted. Another integral feature of an audio script is its preparation in such a way as to bring in constant reiteration. This would ensure a greater span of attention of the young learner. Moreover, constant repetition would help eliminate dialectical and regional variations that are present in the phonetic make-up of the growing user of the language.

Besides the theoretical aspect, a successful script depends largely on other practical considerations. The most vital point that has to be kept in mind is that a script should at no cost appear pedagogic, scholarly or didactic. This would make it stiff, rigid and affected. A natural and unaffected style is what is aimed at, making the listener comfortable, establishing

an instant rapport with the voice that emanates from the audio cassette recorder. Secondly, an attempt has to be made to avoid monotony in the audio rendering. A flat voice, droning on in a monotone would reverse the aim of preparing the cassette. A lively and friendly voice, talking slowly would be eminently suitable. Repetitive dwelling on focus items done with subtle and intelligent variation is needed. A dialogic representation is often more successful than a monologic rendering of the teaching items. Lastly, use of contrast, brought in through the medium of vocal contrast brings in an element of elegant variation. A deep baritone alternated with a clear feminine voice results in an interlocution that eliminates the possibility of the programme being cast into a stereotypic mould.

An audio script can be initiated in many ways and a random selection (taken from *Let's Learn English — Book I*) is presented here.

AUDIO SCRIPT

Audio support material to be used for teaching of the text *Let's Learn English (Book-I)* prepared by CIEFL, Hyderabad and NCERT, New Delhi.

I. Objectives

- (a) Providing aural support to the textual materials, keeping in mind, the factors that facilitate internalization of materials taught, e.g. variety, interest and an informal style, shunning pedagogical rigidity.
- (b) Providing for better enrichment of the material already learnt in the classroom.
- (c) Facilitating reinforcement of the text-

- book material through use of lexical items in different situational patterns
- (d) Providing some nursery rhymes to help the child get a feel of the English language in use as well as to help develop phonetic correctness and right pronunciation.

II. Target Group : Primary Children . Class I

III Learning Items

- (a) Phonetic instruction
- (b) Concept of antonyms
- (c) General conversation in simple and informal manner.

IV. Content Outline

Varies :Voice No.1	Anchor person
Voice No.2 & 3	Children in the age group 8-11

V₁: Hello, friends! Come, let us talk to each other about various things. Let me first introduce you to our young friends who are with me today. Here is Rita

V₂: Hello, I am Rita

V₁: And this is Ashok

V₃: Hello friends, I am Ashok.

V₁: Rita here knows a lot of little poems. Today she will recite a poem for us. Let us hear Rita carefully.

— Musical Interlude —

V₂: Said Mary "My dolly is sick, sick, sick so run for the doctor, Quick, quick, quick"

He came with his cane
And he came with his hat
He came to the door
with a tat-tat-tat

He looked at the dolly.
And then shook his head,
He said, "You must put her
To bed, bed, bed

"You must keep her very warm
And very, very, still;
And, when I come tomorrow,
you must pay me my bill"

V₁: Now, that was a very good poem, indeed! Let us hope that Mary's little dolly becomes well soon. And now, our friend Ashok will recite a small poem for us. His poem will teach us to count too. Let us hear him.

— Musical Interlude —

V₃: One two,
Buckle my shoe
Three, four
Shut the door
Five, six
Pick up sticks
Seven, eight
Lay them straight
Nine, ten
A big, fat hen.

— Musical Interlude —

V₁: Let us now listen to some words carefully. We will first spell them and then read them out.
CAT is cat
BAG is bag
PEN is pen
TEN is ten
NIB is nib
PIN is pin
BALL is ball
TALL is tall
BUS is bus
GUN is gun

Rita and Ashok, I have some flowers here. There are some red flowers. Can you count them, please Rita?

V₂: Yes, *One - two - three - four - five*. There are five red flowers here.

V₁: Is there any white flower, Ashok?

V₃: No, there isn't. There are blue flowers

V₁: Can you please count the blue flowers?

V₃: Yes. There are *one - two - three - four - five* and *six*— six blue flowers here.

V₁: Do you like flowers, Rita?

V₂: Yes, I do. Even my mother likes flowers. She puts *red* flowers in her *black* hair. They look so nice.

V₃: My father likes *white* colour. He wears shirts that are *white* in colour.

V₁: But Ashok, your shirt is *blue* like the sky.

V₃: Yes. I like *blue* colour. The blue sky looks so nice. It is so *big*.

V₂: And the stars look so *small* in the sky. Can we touch the stars?

V₁: No dear, we cannot. We are not so *tall*.

V₂: Yes. Ashok is quite *short*.

V₃: No, I am not! I am as *tall* as you, Rita.

V₁: Let us not get into an argument. Listen to this little poem, which tells us what happened to Solomon Grundy during the days of the week

Solomon Grundy

Solomon Grundy
Born on Monday,
Christened on Tuesday,
Married on Wednesday
Took ill on Thursday,
Worse on Friday,
Died on Saturday,
Buried on Sunday,
And that was the end of Solomon Grundy.

I hope, friends, you liked this little poem on Solomon Grundy. Try to learn it and you will also learn the days of the week. Thank you, dear Rita and Ashok for being with us today. Goodbye, for now.

V₂: Goodbye

V₃: Goodbye.

— Musical Interlude —

— End of the script —

Besides preparation of audio support materials for prescribed texts, other programmes can also be devised and recorded which need not be taxonomised to any distinct category. They could be general conversation sessions recorded with the students themselves to provide them greater thrill of involvement and proximity in the second language. Exposure to such materials would help eliminate personal faults of pronunciation, intonation and rhythm. Though the product must appear casual, unaffected and simple, its script has to be executed with precision and care. S.R. Ingram (1965) in his paper on audio-aids in modern language teaching suggests the following technique of preparing the audio material. He says :

Choose your material carefully — say two sentences illustrating certain points of pronunciation and intonation. Practice them with a small number of pupils before you record this to give them confidence as well as practice — then record their voices straight off... Next re-record, hoping you have improved on the original and of course using the same speakers. Finally, play the original and the second recording and try to learn from it all.

The audio-lingual mode of teaching has been found to have distinct advantages. Ear-training facilitates speaking and articulation is to a large extent dependent on hearing sounds accurately. When listening comprehension precedes speaking, especially in the case of primary level teaching, the students' initial experience includes more correct responses and more frequent positive reinforcement. Moreover, the student sheds apprehension of a new subject and develops confidence in his own language learning ability. Stern (1983) remarks that this approach has long lasting reference for it introduces "specifically designed techniques of auditory and oral practice, while previously oral practice had been simply textbook exercises read aloud, and the sequencing of different language skills that had not been treated consistently as pedagogically relevant".

The fact exists that the audio-visual media support to instructional materials is superior to the audio-lingual system. It comes closest to simulation of direct experiences, through visual impact. This ensures greater assimilation and retention of the teaching items. However, in the Indian context, it is not yet very suitable as it requires an infrastructural support in the school system which is often not forth-

coming in ordinary schools. Moreover, it is economically not viable to produce and retain such materials about the utilization of which one is doubtful. Audio-system is simple, cost-effective and within the reach of most schools as the components needed for its successful use are simple and few.

Teaching with audio-lingual support materials would undoubtedly help the learner in intuiting syntactic rules. Besides it would help them to discover unconsciously that there is a grammatical system that governs sentence patterns. Prescriptionism of grammar teaching could be effectively avoided. A greater exposure to the target language can be achieved through use of support materials to orient, enrich and interest the learner to use a new language. It is, however, not in a vacuum that this pattern of teaching can work. No method can effectively substitute a qualified and trained teacher. A paradigm needs to be devised whereby audio materials could be made more teacher-centered for optimum utilization in the class by trained teachers. In the modern age of technological advancement, there is a need for essentializing and homogenising use of educational technological aids with actual textbook teaching to usher in the coming century with ease and confidence.

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Role of Teachers in the Emerging Indian Society : A Review

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In the present Indian society, the teacher will have to cater to the requirements of the cognitive, affective and psychomotor aspects of education. He has to develop in his pupils the faculty of critical thinking, of not blindly accepting but verifying and then accepting. Creativity is another aspect which the teacher cannot ignore. He has to accept the challenge of generating thirst for knowledge, a search for truth and a spirit of enquiry or experiment. In the present paper, the role of teachers has been highlighted keeping in view the fast changing world of today and tomorrow.

IN THIS paper, the role of teachers in the past and present, and also the projection of the future role of teachers in the emerging Indian society have been highlighted. These roles of teachers are based on literature and the empirical evidences obtained through various studies, documents and reports of various commissions available on the subject.

The Concept

The role of a teacher is a concept used in the Sociology of Education, which can be explained as the functionary position or status of an individual working as a teacher. It is slightly different from the

status of the teacher. Status is a general position or standing or a stature of teachers in a society whereas role is the position of a teacher in relation to the functions, responsibilities and duties assigned to him/her in a school.

Roles in Primitive and Traditional Societies

Prior to the modern industrial societies there were primitive, tribal, agrarian, rural and pre-industrial societies. In these societies, traditions or customs dominated the lives of the people. Their whole outlook was coloured by the considerations of traditional institutions like clans, castes,

and some other sub-divisions of the community. Because of these the system of education was also influenced by the traditions or customs prevailing at that time.

Main emphasis in the system then, was on the transmission of traditional values, attitudes and occupational skills to children. Therefore, the role of a teacher in these societies was simple and tradition bound. The teacher was supposed to socialise children on the basis of traditional values. Besides, he was fully responsible for their basic education (primary education) and also for preparing them to take up the roles as expected by their elders.

Roles in the Modern Industrial Society

In contrast to the traditional society the industrial society is very complex, because of modernisation and advancement in science and technology. Now, society demands specialisation in every field in order to cope up with this new situation. In such a society, the teacher should be professionally very sound. He should perform his/her multifarious roles both in the school and outside the school and cater to the needs of education and society. In this modern industrial society, the traditional and general role of the teacher may not prove effective. Besides teaching, the modern teacher should be fully conversant in the field of screening, selecting, guiding, evaluating, maintaining and organising. Thus fulfilling the needs and aspirations of the modern society. The professional requirements of a teacher today, as explained in the UNESCO publications, are mastery over the content, competency for teaching, a firm resolve for full justice to the responsibilities of doing things other than teaching in the school or outside the school, and

innovativeness in approach and teaching strategies. These are in a nutshell some of the theoretical ideas pertaining to the roles of a teacher in different societies.

Indian Scenario

In our country, the teacher was highly respected in ancient times. He was considered a pioneer, preacher and propagator of culture. He was a *guru* who led the disciple from darkness to light, from falsehood to reality and from death to immortality. He started educating his students by initiating them into the world of knowledge or *gyana*. For imparting this knowledge or *gyana*, he had the advantage of controlling the educational environment of the students in *ashram* and thus succeeded in achieving the desired goals of education. He was a guide, friend and philosopher to his disciples. He was considered to be the very personification of God—Brahma, Vishnu and Shiva—creating new values in the minds of the children, sustaining the eternal values of life and destroying *agyana* or ignorance.

He used to command high respect in the society and got obedience and reverence from the pupil. In many Hindu religious books like *Vedas*, *Upanishad* and *Manusmriti* we find descriptions of teachers, i.e. *gurus* commanding absolute obedience from the pupils. In the great epic, the *Ramayana*, Dashrath, the King of Ayodhya, could not refuse to give to Vishwamitra his sons Rama and Laxmana, who were very dear to him.

In medieval India also, the teacher was the friend, guide and philosopher of the community and he was well-looked after by the community itself.

In recent times, however, with changes in the political system, the teacher is no

more the leader of the village community. His status in certain cases has been reduced to that of a football, kicked into the field, depending upon the whims and fancies of the political leaders and authorities. His role is to impart 3 R's. He is also assigned a number of other roles to ensure total development in children.

Even today, there are great teachers in our society but their number may be very small. They have the same missionary zeal as we find in teachers of the past. It is they who still inspire the students. In this age of scepticism and new challenges, this zeal on the part of the teachers is absolutely necessary. These teachers have to work with mutual respect and understanding. They have to recognise and respect the aspirations and hopes of the growing child and nourish it.

In the cultural field, the teacher should not only act as a preserver and propagator of our values but also come forward to re-interpret those in a new light as per the demands of the changing times.

Roles in the Future Indian Society

Visualising the emerging Indian society, it may be hoped that our country would be able to complete all the major multipurpose river valley projects by the end of the 20th Century which would ensure for our society enough power, facilities for irrigation and navigation, enough fisheries products, and a sufficient increase in agricultural and industrial products (in consumer industries as well as heavy industries). It is also hoped that nuclear energy along with other non-conventional power including solar energy etc. will be generated to a full extent and will be maximally utilised for peaceful purposes. Besides, network of communication, radio

and TV transmission both inside and overseas through the introduction of additional channels, a network of roadways and railways and launching of more satellites will also be accomplished. Computer techniques will be utilised in printing technology as well as in the industries, commerce, transportation and communication systems. On the other hand, the population of the country will also increase rapidly (say more than 90 crore) but there will be an attempt to put a check on it. Because of all these developments there will also be a possibility of increased educational activities or facilities in the country at that time, e.g. increase in the number of all types of institutions, the number of teacher training institutions and professional institutions, student population at all levels, and the number of universities, creation of new branches of knowledge, use of Educational Technology in classroom teaching, emphasis on non-formal curriculum, and creation of open schools and open universities in the country. Various schemes aiming at education for all and the development of vocational skills will also get an impetus in the country.

On the social front, it is hoped that our society, which is still divided on the basis of various types of religion, casteism and regions, might cultivate a secular outlook. People at that time would probably have a rational attitude or scientific temper. This will also be possible due to the spread of education, the impact of the national programmes telecast through the network of TV and broadcasts through the network of radio.

In such an emerging Indian society as described above, the teacher will have to cater to the requirements of the cognitive, affective and psychomotor aspects of

education. He has to develop in his pupils the faculty of critical thinking, of not blindly accepting but verifying and then accepting. Creativity is another aspect which the teacher cannot ignore. He has to accept the challenge of generating thirst for knowledge, a search for truth and a spirit of enquiry or experimentation. He has also to accept the duty of enabling the pupils to feel, face and fight the problem of daily wants thus preparing them for the real world with the spirit of optimism. If by chance, there is failure, the teacher has to train them to accept defeat with grace and adjust themselves to the situation.

A spirit of 'Live and let live' is also to be re-emphasised. The teacher should not forget this role as a preserver of national integrity. He has to develop a national spirit without which the community may dis-integrate once again. He should also create around him an awareness of the national issues.

Since the teacher has to show the way to his pupils, he has to practice what he preaches. He must develop right behaviour in himself and have a correct attitude towards national and international issues. He has to set a role model before the child and the community.

We cannot say with confidence as to what type of social background will be required to suit an emerging society, however if a teacher works with sincerity, integrity and a sense of devotion and understanding of the drives and needs of children on one hand and the goals to be achieved on the other, he will never fail.

Some Research Findings

Some empirical evidences are given to uphold the general perception of the roles of a teacher in India. In 1952, Adaval

emphasised in his doctoral study about some essential qualities to be possessed by the would-be teacher. These qualities according to him, are (i) a good physique, (ii) mastery over the subject, (iii) a positive attitude towards teaching, and (iv) love for children. In 1967, in her doctoral project Sherry tried out the qualities of the would-be teachers in prediction of achieving success in teaching the B.Ed. students at Agra. Similarly, Kaul (1972) and Chhaya (1974) also portrayed the psychological characteristics of popular teachers. According to Thakur (1973), superior teachers from the secondary schools situated in Delhi were not socially recognised and had certain professional problems such as the lack of counselling and guidance services, defective inspection, lack of participation in in-service programmes, lack of teaching-aids and instructional materials for reinforcing teaching work etc. The prominent characteristics of effective or popular teachers, based on the studies conducted by Kaul (1972) and Chhaya (1974) were (i) a favourable attitude towards teaching work, (ii) better personal adjustment, (iii) more interest in teaching and non-teaching work in the school, (iv) emotional stability, and (v) a firm belief in theoretical, social, political and religious values.

On the other hand, Bhatnagar and Singh (1966) made a pilot study of primary school teachers in the district of Bullandshahar (Uttar Pradesh) on the sample consisting of more than one thousand primary school teachers from municipal towns and from rural areas in the district. According to this study, a primary school teacher performed various types of roles pertaining to teaching and non-teaching. Teaching roles included

teaching of all the subjects, diagnostic and remedial teaching, checking of the assignments, examination work, organisation of co-curricular activities etc. Besides, the non-teaching roles include calling of students from their houses when they remained absent from schools for a long time, patrolling duties, clerical work, maintenance of records, social service at the time of festivals and fairs and so on and so forth. About the status of the primary school teacher, it is further reported in this study that his rank in the village is third. The first rank goes to *Daroga* and the second to *Patwari* or *Lekhpal*. In the urban areas, he has no status at all. Even a lower-division clerk has a better status than that of a primary school teacher.

Similarly, the study of Venkaterayappa and Mukta (1971) too had discouraging findings. According to them, primary school teachers in the city of Mysore had a very poor achievement, their income was very low. Their non-participation in social activities was also amply proved in the study. On the contrary, they were involved only in the programme of family planning. In this connection, a few surveys conducted on the primary school teachers by Bombay Municipal Corporation in 1967 and in subsequent years were also important. In addition to these, there are some more studies on role expectation and role performance by teachers, for instance, a study conducted by the Department of Post-graduate studies in Education (1972), Bangalore University, deserves a special mention. From the various studies on this aspect, it can be concluded that there is significant gap between the roles expected of and the roles performed by the teachers.

In the document *Challenges of Education—Policy Perspective* in 1985, several challenges in educational scenario of this country, were highlighted. Under the problem of universalisation of primary education, there is special mention of high drop-out rates among the girls, Scheduled Castes and Scheduled Tribes and various types of other tribal students, it also mentions the expansion of education at all levels without any systematic plan perspective. There is a great increase in the number of illiterates (437 million in 1981) in the country. Non-availability of basic amenities in the school also exists in the country. Teaching learning process is not keeping pace with the latest in this field keeping in view the modern technological advancements. Non-credibility of examination and grading are there. Education proves to be one of the non-effective ways of removing the shortcomings of the existing society i.e., unemployment problem among educated and skilled youths, difficulties in the implementation of Vocational Education etc. In the light of these challenges, it is necessary that the role of teachers is also suitably changed so that they can meet these challenges effectively in the emerging Indian society. With this change in the teacher's role, it is also important that the teacher education programme at all levels is suitably modernised.

Keeping in view all these challenges in education, the National Policy on Education (NPE) was framed in 1986. In this the roles of teachers were thus explained :

Teachers should have the freedom to innovate, to devise appropriate methods of communication and activities relevant to the needs and capabilities of and the concerns of the community.

Besides they will continue to play a crucial role in the formulation and implementation of educational programmes. It is further stated in the Policy that

"Norms of accountability will be laid down with incentives for good performance and disincentives for non-performance.

Teachers' associations must play a significant role in upholding professional integrity, enhancing the dignity of the teacher and curbing professional misconduct. Afterwards, a Committee for the Review of the National Policy on Education, 1986 was also set up in 1990. The Committee emphasised the commitment on the part of teachers along with the development of some personal attributes (pp.300-309). Keeping in view all the recommendations of the Ramamurti Committee, the NPE 1986 was reviewed and modifications suggested through the *Programme of Action 1992*. According to this document, the centrally sponsored schemes in teacher education and also in some other significant areas have been launched to revolutionize the field of education

Conclusion

On the basis of the foregoing discussion,

it may be concluded that it is the society which makes the teacher function well and not vice versa. It is also a fact that the teacher in the past was getting full respect which has totally disappeared now. The existing as well as the future society should take care of this factor so that the teacher does his/her duties with the same missionary zeal and without any prejudice. At this juncture, when there are several dowry deaths and so many anti-social activities, it is again the teacher who may influence our young minds, through the inculcation of some desirable values against anti-social activities prevailing today. Besides, during this highly inflationary period, some motivation in the form of additional facilities to teachers and revision of their respective pay scales from time to time without any hesitation should be possible. It is also a fact that the gap between the roles expected and the roles performed by the teacher should be narrowed down in the society. Finally, it is very important that the teacher should be professionally well trained so that he is able to face any kind of challenge he comes across

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Students' Self-Assessment and Assessment of Classmates and Teacher A Comparative Study

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Given an opportunity, the students can assess their own performance and that of their classmates. It would be quite interesting to know how a student perceives himself and how he is perceived by his classmates and teacher. This article makes an attempt to compare the self-assessment of a student with that of his classmates and teacher.

TEACHING and learning are complementary to each other. Effective teaching results in better understanding of the concepts. The general way of finding the effectiveness of teaching is through feed-back. If the target group is small it can be done by oral test. However for a larger group of students the evidences may be obtained by written achievement test. In this way evaluation forms an integral component of the teaching learning process. A better parameter to know about students' learning is through continuous assessment rather than through the test which is normally conducted at the end of the course. It is the element of continuity, periodicity and variety that gives the continuous

assessment system a cut above other types of evaluation.

In most of the colleges, generally the teacher evaluates the students' papers and rarely discusses the scheme of evaluation about his or her observations on the performance of the students. This method does not serve any major purpose. The students are required to know the processes involved in evaluation and they should be given some opportunities to assess their own performance and the performance of their friends as a sort of practical experience. It will be interesting to know how a student perceives himself and how he is perceived by his classmates and the teacher. The present study attempts to

compare the students' self-assessment with that of their classmates and teacher

Background of the Study

This study was carried out in Regional Institute of Education, Mysore with the third year B Sc. Ed (5th semester) course students (21 boys and 35 girls) enrolled during 1994-95. The students were drawn from different States of South India. The students attended two semesters of approximately 18 weeks each to complete one academic year. They were continuously assessed throughout the semester in both theory papers and practicals. During the period of the course, the investigator taught Inorganic Chemistry. The investigator divided the content into three units such as Transition elements, chemistry of transition elements and Coordination chemistry. He conducted one test on each unit. These three units were taught in 18 hours. The students had to take up teaching practice in different schools in the 7th semester and were expected to conduct tests and evaluate the papers. Hence it was worthwhile to take up this study and to train the students in the method of evaluation by repeated trials.

Objectives of the Study

1. To study the self perception of the students on the basis of their performance
2. To find out the relationship between teacher's assessment and students' self-assessment and the assessment of the classmates
3. To train the student teachers about the method of evaluation and to narrow down the distortion if any between the assessments by repeated trials.

Method of Study

The tests were conducted in regular classroom by changing the seating arrangement so as to ensure and create an ideal test situation. The time limit given for answering the test was 20/30 minutes. The investigator gave a slip of paper to each student, instructed them to write 'self' to denote self assessment at the top and to give their name and expected marks on it, at the expiry of the time limit. Later, all the papers were collected and distributed at random in the class taking care to see that no one gets his/her own paper. The investigator then gave another slip of paper to each student and instructed to write the name of his/her classmates whose paper was to be assessed. The students were instructed to enter marks on the slips but not on the answer scripts. All the slips and papers were collected separately at the end. The entire process was over within one hour, that being the allotted time for a period. The investigator assessed all the answer scripts independently and indicated the scores on the scripts. The investigator returned the valued answer scripts to the students in the next class and discussed the scheme of evaluation and his observations about the students' performance. Same procedure was adopted for all the tests.

Hypotheses

1. There is no relation between students' self-assessment and the teacher's assessment.
2. Classmates' assessment is not in agreement with that of self-assessment.
3. There is no relation between teacher's assessment and classmates' assessment.

The Pearson product moment correlation coefficient (r) between students' self assessment and teacher's assessment, self assessment and classmates' assessment; peer's assessment and teacher's assessment were computed. The significance of these coefficients of correlation were tested using t -test at 0.05 and 0.01 levels and are shown in Table 1.

Table 1

The Coefficients of Correlation(r) and Their Significance

<i>Test</i>	<i>Self and teacher assessment</i>	<i>Classmates' and self-assessment</i>	<i>Teacher and classmates' assessment</i>
1	0.3018 (ns)	0.1870 (ns)	0.3660*
2	0.5444**	0.7879**	0.7988**
3	0.6031**	0.6286**	0.5842**

* significant at 0.05 level

** significant at 0.01 level

Results and Discussion

Scrutiny of coefficients of correlation shown in Table 1 reveals that there is no significant correlation between students' self-assessment and teacher's assessment in test 1 indicating that the students' perception in general is different from that of the teacher. Hence, the scheme of evaluation and methods involved in evaluation are discussed at length which resulted in good agreement between these two assessments in tests 2 and 3. Moreover, correlation between self-assessment and teacher's assessment is increased in significance from 0.05 level to 0.01 level from test 2 to the test 3. On examining the table it is observed that the coefficient of correlation between students' self-assessment and

their classmates' assessment was not found to be significant in test 1. This may be attributed to the general tendency of students to overrate themselves on their performance and to their lack of knowledge about the method of evaluation. However, good agreement between the two assessments is seen in tests 2 and 3. The r values are found to be significant at 0.01 level. It is interesting to note that the r values are found to be significant in test 1 at 0.05 level and in tests 2 and 3 at 0.01 level between classmates' and teacher's assessments. The students who overrated their performance at the time of self-evaluation became more cautious at the time of evaluating others' papers as they assumed the special responsibility of a teacher. This was known at the time of post-test discussion.

This study is quite helpful to eradicate from the mind of the students that the teachers are biased and are influenced by different factors as assessments made by self, classmates and teacher are in good agreement. By dividing the content into different units and by administering a test at the end ensure a continuous students learning process and also changes the teaching strategies if required. It also helps the author to find out the difference in the learning abilities of the students, thereby to think of all the possible strategies so as to put the weak students in the mainstream. All the students enjoyed this activity as they got an opportunity to assess themselves, assess one another and to compare their assessments with the teacher's assessment. It is also possible to narrow down the distortion between the students' perceptions and the teacher's

perception. This has been clearly observed in the results obtained from the study by having repeated trials. This study will definitely help the student teachers to realise their self awareness and also to assess others in the near future. This will reflect validity and reliability.

Further Study

This type of study may be taken up by different teachers in various subjects in order to provide more opportunities to the students so as to assess themselves and others and to acquire mastery on evaluation techniques.

The Place of Ethics in Social Science and Science Teaching in Tamil Nadu

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The weakening of social, ethical and moral values in the younger generation is creating many social and ethical conflicts. There is an imminent need for readjustments in the curriculum in order to make education a forceful tool for the cultivation of social and moral values. Education should foster universal and eternal values, oriented towards the unity and integration of our people. Such type of value education will be helpful in eliminating violence, religious fanaticism, fatalism, etc. Ethics and moral values can be taught effectively through social science and science subjects. In the present study, the author examines the place of ethics in social science and science teaching with special reference to the State of Tamil Nadu.

It is imperative for every individual and society to have right type of values and principles. The selection of such values and virtues and their effective inculcation perpetuates the stability and growth of human society. However, the modern societies, inspired by materialistic philosophy, prefer materialistic values to the neglect of ethical and moral values. Even the so-called development of science and technology in the western societies and elsewhere, leading to

higher standard of living and impressive material growth, has not led to the collective welfare of mankind. Instead it has led to a decline of human values. Thanks to the concerted efforts of enlightened citizens, governmental and non-governmental organizations, there is a growing concern over the accelerating incidence of overt and covert (direct and structural) violence in society in general, and the weakening of ethical fibres of students and youngsters in particular.

The moral and ethical standards of students in the twentieth century have declined alarmingly (Eby, 1982). The materialistic value choice, to the neglect of ethical values, and lack of proper emphasis on moral and ethical value input in education have, perhaps, been the major causes of the present value crisis, ethico-moral poverty, and peacelessness. Herbert Read (1950), while highlighting the problem of overemphasis on intellectual dimensions of education to the neglect of ethical value components, explains that, "The whole ideal of education is intellectual. It tends to become even narrower than that; the ideal . . . is scientific. Even in subjects which used to be described as 'liberal' — philosophy, literature and history — the spirit of teaching becomes increasingly 'objective' or 'positive' and all questions of value are rigidly excluded"

The Education Commission (1964-66) emphasized that the weakening of social, ethical and moral values in the younger generation is creating many serious social and ethical conflicts. There is already a desire among some western thinkers to balance the knowledge and skills which science and technology bring forth with the values and insights associated with ethics and religion viz a search for the knowledge of the self, of the meaning of life, of the relationship of man to other human beings and to the ultimate reality. The National Policy on Education, 1986 also lays major emphasis on value input in education: "The growing concern over the erosion of essential values and an increasing cynicism in society has brought to focus the need for readjustments in the curriculum in order to

make education a forceful tool for the cultivation of social and moral values. In our culturally plural society, education should foster universal and eternal values, oriented towards the unity and integration of our people. Such value education should help eliminate obscurantism, religious fanaticism, violence, superstition and fatalism". NPE in its very constructive suggestions, makes it clear that, "The existing schism between the formal system of education and the country's rich and varied cultural traditions needs to be bridged. The preoccupation with modern technologies cannot be allowed to sever our new generations from the roots in India's history and culture. Deculturisation, dehumanisation and alienation must be avoided at all costs. Education can and must bring about the fine synthesis between change-oriented technologies and the continuity of cultural tradition"

With this background, it is premised that, ethics and moral values can be taught effectively through social science and science subjects. The present study has been undertaken to study the place of ethics in social science and science teaching with special reference to Tamil Nadu State.

Objectives of the Study

The major objectives of the study are .

1. To find out the virtues and values of ethics theoretically emphasized in Tamil Nadu secondary school textbooks and syllabi with reference to social science and science of IX and X standards.
2. To find out the virtues and values of ethics emphasized in practice by the teachers of Social Science and Science of IX and X standards

3. To identify the gaps, if any, between the objectives one and two
4. To state suggestions accordingly

Hypothesis of the Study

The following are the hypotheses of this study

1. There will be equal emphasis of the different variables under virtues and values in Classes IX and X Social Science and Science textbooks
2. There will be no disparity in emphasizing virtues and values in the teaching of Social Science and Science among the teachers under different managements.
3. There will be no disparity in emphasizing virtues and values of teaching Social Science and Science among men and women teachers.
4. There will be no disparity in emphasizing virtues and values of teaching Social Science and Science among Graduate and Post-Graduate teachers.
5. There will be no disparity in emphasizing virtues and values of teaching Social Science and Science among the teachers having varied experience

Methodology

In accordance with the objectives of this study, two types of methods were followed: (i) Content Analysis of Classes IX and X Social Science and Science textbooks, and (ii) Teaching of Ethics Response Scale Analysis (TERS).

Sample

For this study two types of samples were selected. They are (i) Textbooks of Social Science and Science for Classes IX

and X, and (ii) a sample of 72 teachers from twenty-three city High and Higher Secondary schools in Madurai. Table. 1 shows the details of the design.

TABLE 1
Schematic Presentation of the Design

1. Variable-Ethics	Virtues 12 components Values 17 components
2. Tools used	(i) Textbooks (ii) TERS
3. Method	
(a) Content Analysis	Class IX Social Science Textbook Class X Social Science Textbook Class IX Science Textbook Class X Science Textbook
(b) Teaching of Ethics Response Scale Analysis	
4. Sample	(i) Social Science and Science Textbooks of Classes IX and X (ii) 72 Graduate and Post-graduate teachers who are teaching Social Science and Science to Classes IX and X in Madurai city High and Higher Secondary schools
5. Sub-groups	(i) Management-Government Corporation/Aided Mission Aided Non-Mission, (ii) Sex — Male/Female (iii) Qualification — Graduate/Post-graduate Teachers (iv) Experience— Less than 5 years/ 6 to 10 years/ between 11 to 15 years/ above 15 years

Tools

Based on the objectives, two types of tools were used for the present study. They are: (i) The textbooks of Social Science and Science for Classes IX and X prescribed by the Government of Tamil

Nadu These were used for content analysis. (ii) Teaching of Ethics Response Scale (TERS) was developed for the purpose of this study. The tool TERS was prepared in Tamil as well as in English with a four-point rating scale.

Data Collection

The data for the present study comprise of two types namely (i) textbooks of Social Science and Science for Classes IX and X for content analysis, (ii) responses from the Social Science and Science teachers of Madurai city High and Higher Secondary Schools regarding their emphasis on the teaching of ethics.

Data Analysis

Content analysis was done to find out the virtues and values in the textbooks and for this, the frequency distribution and percentage were computed for all the sub-variables

Regarding the indepth teaching of virtues and values in Social Science and Science subjects, teachers were given a questionnaire and this was analysed in terms of Mean, SD and the Chi square test was used to find out the significance of the differences among the variables and sample sub-groups

Table 2 presents the results of the content analysis

TABLE 2
Ethics in Social Science and Science Textbooks

Sl. No	Class	Subject	Virtues		Values		Ethics	
			F	P	F	P	F	P
1.	IX	Social Science	92	34.85	172	65.15	264	100.00
2	X	Social Science	102	34.00	198	66.00	300	100.00
3	IX	Science	24	66.67	12	33.33	36	100.00
4	X	Science	29	60.42	19	39.58	48	100.00

F = Frequency

P = Percentage

The textbooks for Social Science and Science were collected for an indepth study. A classification and definition of the variables that comes under ethics was made. In order to have validity of observation, three of the investigators' colleagues were given training in the identification of variables on a particular chapter, the inter-observer reliability was established and it was found high. The second type of data was collected from the responses given by the teachers through TERS.

From Table 2 it is seen that the major variables under Ethics are virtues and values. The higher score of 102 went for virtues in Class X Social Science Textbook comprising a percentage of 34.00. The lowest score of 24 was obtained by the virtues in Class IX Science, comprising a percentage of 66.67.

For values the highest score of 198 was received by Class X Social Science with a percentage of 66.00 and the least in Class IX Science (12 frequencies) with a percentage of 33.33

TABLE 2
Management-wise Analysis of TERS

Sl. No	Management	N	Virtues		Values		Ethics	
			Mean	SD	Mean	SD	Mean	SD
1.	Corporation	14	43.5	3.42	62.00	5.62	105.5	8.61
2.	Government	3	46.33	0.47	66.00	0.82	112.33	0.94
3.	Aided Mission	22	39.64	6.7	57.00	9.60	96.7	16.35
4.	Aided Non-Mission	33	39.1	5.6	57.00	7.4	96.4	10.5

Table 3 presents the Management-wise Analysis of TERS.

It is observed from Table 3 that the Government school has got the highest mean value of 46.33, 66 and SD of 0.47, 0.94 respectively. The lowest mean was got by the Aided Non-Mission with a mean of 39.1, 57.00 and SD of 5.6 and 7.4 for virtues and values. This indicates that the Government school teachers emphasize virtues and values more than other teachers who belonged to different managements. To find out the significant difference the Chi square test was applied and the difference was significant at .01 level with a df 3.

Findings

The important findings of this study are .

1. Among virtues and values, values have been emphasized more in Class X Social Science textbook.
2. There is significant difference in the emphasis between virtues and

values among the teachers working under different managements like Corporation, Government, Aided Mission and Aided Non-Mission.

3. The Government school teachers emphasized ethics more than the teachers working under other types of management like Corporation, Aided Non-Mission.
4. Male and Female teachers do not differ in their emphasis in teaching virtues and values through Social Science and Science subjects.
5. There is significant difference in the emphasis on virtues and values through the teaching of Social Science and Science subjects among the teachers who are having varied lengths of experience; teachers having less than 5 years experience emphasize value more than teachers of the other groups, teachers having 6 to 10 years emphasize virtues more than the other teachers.

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Book Reviews

***Development of Creativity in Indian Schools :
Some Related Issues***

by

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Concept Publishing Company, New Delhi, 1992; Rs 140, pp. 172

THE BOOK is the printed version of the doctoral study conducted by the author. The original title of the thesis was 'Types of Schools and Corresponding Factors as Predictors of Creativity at Secondary Level'. The author through this study investigated into the classroom environment of the different types of schools in relation to their contribution towards development of creative talents of their school children. He studied and compared the creative level of the students of different types of schools and the attitude of their teachers towards the creative students. He also studied the socio-economic status of these students and its relationship with their creative achievements.

The book is divided into seven chapters as usual. The introductory chapter intends to establish the importance of creativity and imagination in the life of an individual. It also briefly deals with the role and importance of environment

and its manipulation for the development of creative learning abilities in children. The author maintains that 'education so far, has emphasised, abilities only in the area of convergent thinking and evaluation, often, at the expense of development, in the area of divergent thinking'.

The study primarily aimed at suggesting desirable changes, which must be brought about in the learning environment, to create a conducive climate in the classroom, so that it may be best suited for nurturing creative talent among students—an aspect which has so far remained neglected in our schools. In order to fulfil this aim the author has framed certain questions and presented answers to them through this investigation. However, a perusal of the book indicates that it lacks a comprehensive treatment to the problem of changing the present classroom climate in favour of creativity and innovation. The book

would serve its readers better, if a chapter or two are included describing the methodology of developing a creative classroom climate and also some definite strategies to change the existing dull and routine classroom. The findings of the study need to be thoroughly discussed and interpreted for arriving at educational implications. These may then form the base for suggesting action points to classroom teachers.

The second chapter deals with the concept of creativity and its assessment. It makes an attempt to bring out some of the important theoretical considerations relating to creativity and environment. Rest of the chapters have been developed on traditional lines.

As a published thesis the book is a welcome addition to the pool of knowledge as it presents a useful information, based on researches conducted so far. The book will primarily benefit research scholars, school and college teachers, who can take cues from the findings and develop their own strategies, for

nourishing the creatively gifted students.

The Bibliography and Index given towards the end of the book make it specially useful for future researchers. Suggestions for further research have also been included which, in all likelihood, would invite young researchers to probe deeper into the realms of creativity and environment.

However, it is felt that a closer editing and a careful look at the reference, will be required in any future edition. It may also be suggested that research studies before being published in the form of book should be thoroughly modified in terms of its format and possibly rewritten keeping in view the larger educational community and general readers, besides the potential researchers. Development of chapters, their nomenclature and content, needs freshness and a more practical approach to the whole problem, for effectively influencing the teachers, parents, educational administrators and above all, the common reader.

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Khilte Phool
A Report on Radio Feasibility Project

by

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National Council of Educational Research and Training, New Delhi, 1994

THE IDEA of starting the radio broadcast for young underprivileged children was first mooted in 1987 by Shri Amrit Rao Shinde, the then Director General of All India Radio. This suggestion took the form of 'Khilte Phool'. The realisation of the paucity of material for young children led to the setting up—in 1975—of Children's Media Laboratory (CML) by the Government of India in collaboration with UNICEF in NCERT. This was done with specific objectives of discovering and developing inexpensive, non-formal and effective media of educational and entertainment value for children in the age group of three to eight years. The CML started working in 1977 and since then it has done considerable developmental and research work in the audio medium and monitored children's programmes broadcast by various stations of All India Radio. It has also helped the development and production of audio programmes in Hindi, Marathi, Assamese, besides conducting script writers' workshops in other regions in order to get scripts in regional languages. It also conducted three national seminars on audio programmes for young children. A proposal was made at the third national seminar to use the produced audio programme for radio broadcast for young

children in the context of implementation of National Policy on Education. It also explored the possibility of using low power transmitters, and made use of local stations to provide enriching and entertaining experiences to children of socially and economically backward classes of society through specially developed radio programmes. The suggestion was adopted and CML followed up the same by preparing a detailed project proposal. This was submitted to the Central Education Unit, AIR, New Delhi for consideration.

In March 1988 Kota (Rajasthan) was selected for the project and the "Radio Feasibility" research project was thus initiated. The entire responsibility of audio programme production was shouldered by CML, NCERT, New Delhi. The target group for the study was the students in lower primary classes of government schools and children in Anganwadis. Broad objectives of the study were (i) to evaluate the potential of radio as a tool for providing enriching experience to 3–8 years old children, especially the underprivileged, and (ii) to use the radio in strengthening teacher's competencies. Its specific objectives were, (a) to improve the listening skills of children, to enhance their vocabulary and improve their oral

expression, (b) to promote their cognitive skills such as sequential thinking, problem solving, concept formation, and an awareness of their immediate environment and also their cultural heritage, (c) to develop skills in teachers/anganwadi workers so as to use play way and activity method in teaching young children, (d) to develop a positive attitude towards disadvantaged children and to help them to interact with other children, more actively

UNICEF, Directorate General, AIR, New Delhi, Department of Social Welfare, Jaipur, Directorate of Education, Bikaner and NCERT were actively involved in the project right from planning stage. UNICEF financed the project and provided 150 radio transistors and battery cells to 100 experimental anganwadis and 50 to Classes I and II of 25 experimental primary schools.

A baseline survey was conducted at Kota to collect the requisite information, i.e. daily time table of the Anganwadis, Classes I and II of primary schools, knowledge of Anganwadi workers and teachers of Classes I and II on the early childhood care and education, their attitude towards use of radio, their behaviour towards parents and children, attitude of parents towards Anganwadis, use of radio for young children etc. Schedules were prepared to interview the Anganwadi workers, mothers/grand mothers/elder sisters for eliciting specific information/understanding of the importance of early childhood care and education, their role in the Anganwadi, their attitude towards the use of radio to facilitate ECCE and to learn about the facilities available at home

The survey revealed that the method

of teaching in Anganwadis was traditional. Play formed a very small part of AW's daily routine. No small group activities were organised. Most of the AW's felt that the radio can be a useful medium to attract children to the Anganwadi.

The broadcasting of children's programme 'Khilte Phool' commenced from AIR, Kota on October 2, 1988 with its first programme on 'Gandhiji'.

100 Anganwadis and 25 schools (Classes I and II) from Kota city were selected to form the experimental group in the project. Out of the eight sectors of the ICDS project in Kota city four formed the experimental group and the other four, the control group. Both the groups were comparable in terms of geographical location, occupational distribution and socio-economic status of the population. Required training and orientation through various workshops was imparted both to the personnel at the grassroots and supervisory levels so as to enable them to effectively monitor and guide the implementation of the project activities.

After the completion of one year of the radio broadcast experiment, a comprehensive evaluation of the project was undertaken in 75 Anganwadis and 20 primary schools from the experimental group. The control sample included Anganwadis and primary schools that were comparable in terms of geographical situation, parents' occupations and socio-economic status of the population with the experimental group.

Tools were administered on 760 children from 150 Anganwadis and 40 lower primary classes. The tools included sets of flash cards for (a) listening comprehension and oral expression; (b) awareness of immediate environment;

(c) awareness of cultural heritage, (d) sequential thinking and wooden blocks for concepts of colour and shape

Separate tabulation sheets were prepared for different groups of children. The scores obtained by each child under each category was summed up. It was found that the children from the experimental group were more articulate and had a richer vocabulary. They made greater use of gestures, appropriate voice modulations and correct use of gender and tense while narrating back a story. They were also more knowledgeable and aware of their immediate environment and cultural heritage. The observation of Anganwadi workers/teachers showed improvement in their teaching styles and they became more sensitive to the needs of disadvan-

tagged children and encouraged them to participate in different activities and listened to their problems.

The study in a nutshell established the potential of radio as a powerful medium for providing enriching experiences to the children and in adding to the competencies of the teachers and Anganwadi workers. It makes a forceful plea for a follow up and replication of similar efforts in other regions and States of the country. Unless such a step is taken in right earnest and similar projects are launched specially prepared for children in the age group 3-8 years to cover as many Anganwadis and primary schools as possible the impact generated by the Radio Feasibility Project 'Khulte Phool' will not last long.

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SPECIAL ISSUE
ON
Education for Women's Equities

K. Suresh
16/12/96

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राष्ट्रीय शैक्षिक अनुसंधान और प्रशिक्षण परिषद्
NATIONAL COUNCIL OF EDUCATIONAL RESEARCH AND TRAINING

The *Journal of Indian Education* is a quarterly periodical published by the National Council of Educational Research and Training, New Delhi

The purpose is to provide a forum for teachers, teacher-educators, educational administrators and research workers, to encourage original and critical thinking in education through presentation of novel ideas, critical appraisals of contemporary educational problems and views and experiences on improved educational practices. The contents include thought-provoking articles by distinguished educationists, challenging discussions, analysis of educational issues and problems, book reviews and other features.

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TO OUR CONTRIBUTORS

JIE invites articles / papers on the impact of educational research on classroom practices and policy decisions. Specific examples where this impact is apparent may be given.

— ACADEMIC EDITOR

Editorial

EDUCATION for Women's Equality is one of the thrust areas in which the National Policy on Education, 1986 has been quite emphatic and elaborate. In this context the Programme of Action, 1992 states "Education for Women's Equality is too important to be left to the individual commitments or proclivities of persons in charge of implementing programmes. It should be incumbent on all actors, agencies and institutions in the field of education at all levels to be gender sensitive and ensure that women have their rightful share in all educational programmes and activities"

There are many aspects of active life, especially the finer ones in which girls can excel given the opportunity. Experience shows that jobs requiring endurance, sensitivity, compassion, understanding of human nature and realities, accuracy and critical judgement, freshness of approach, calculated and cool handling of certain types of situations, human relations, deciding of strategies, etc., are very aptly undertaken and fulfilled by women. If opportunities are provided to girls for educating and training their minds in such intellectual and vocational pursuits which bring in the interplay of the above personality factors, the education system can produce an independent workforce which, instead of jamming the same frequency as those of boys, will carve out a frequency band of its own which will be much more melodious and useful to social harmony.

In this special issue of the journal, we bring to our readers a collection of articles and papers which range from historical development to the present situation of education of the girl child, the need for social mobilization, creation of girl friendly classrooms and preparing gender responsive teachers. Problems of Scheduled Caste and Scheduled Tribe girls are also discussed. Major findings of gender studies in Haryana and Tamil Nadu are reported highlighting the varying perceptions of parents, girls and the educational personnel on reasons for continuance, discontinuance and non-enrolment of girls and utility of girls' education and gender equality. Haryana's efforts at advancing secondary education for girls have been analyzed. The issue of technical and vocational education of girls has also been touched.

We hope this special endeavour will arouse further interest among our readers and scholars towards this special theme. We look forward to your comments and writings on various efforts being made countrywide to promote education of women and girls in the spirit of equality for our future volumes.

M. SEN GUPTA

EDUCATION FOR WOMEN'S EQUALITY

Education will be used as an agent of basic change in the status of woman. In order to neutralise the accumulated distortions of the past, there will be a well-conceived edge in favour of women. The National Education System will play a positive interventionist role in the empowerment of women. It will foster the development of new values through redesigned curricula, textbooks, the training and orientation of teachers, decision makers and administrators, and the active involvement of educational institutions.

— NPE 1986

The Girl Child in India

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This paper presents a critical analysis of the situation of the girl child in India, documenting strategies and processes that have been employed to highlight the issues of the girl child with special reference to social mobilization for change in discriminatory socio-cultural values, attitudes and practices. Survival, protection and development of the girl child are the major issues for social mobilization in India. Few countries in the world today are better equipped to generate the participatory involvement so necessary for social mobilization on this important issue affecting close to half of the human race! The process of social mobilization essentially goes through several phases which need not be sequential: consciousness raising, advocacy, constitutional and legal norms, changes in set patterns of thought and behaviour. The ultimate objective of all strategies for gender related mobilization should be to ensure that being a man or a woman should neither work to the advantage nor to the disadvantage of a person. We are far from this goal. To reach that objective, we need a set of intermediate and immediate goals. This paper is an attempt to find out where we are and where we want to go and how

THE GIRL child in India is in a unique position in that the political-legal framework is fully developed and geared to promoting equality between the sexes and ending any form of discrimination. This framework is further supported by a

large number of enabling measures in the form of forward-looking policies and strategies geared to children as a whole, women in general and girls in particular. While in several respects the issues concerning a girl child may be shared by

several developing countries, in India, these acquire a different sociological nuance. This is partly inherent in the Indian mythological and religious tradition which both deifies and denigrates women. The discriminatory socio-cultural values, attitudes and practices hinder the utilization of the available structures and opportunities by her. This leads us to a situation where girls both prosper and suffer.

The Two Sides of the Coin

The girl child is worshipped and felicitated twice a year in homes and temples as the incarnate of the mother goddess. She runs swiftly and scales lofty mountains with ease. She flies air buses and boeings. She parachutes down from skies, rides horses and marches smartly, as smart police women, an army, airforce or a naval officer, a scientist, a lawyer, a judge, a teacher, a doctor, a leader. Given equal opportunities and equal love and care she excels at anything, often, outracing her brother. This miniscule but highly visible minority of the Indian girls can provide the clues for public policies and programmes and necessary changes in societal and family attitudes.

The other side of the coin is the *Lesser Child*. Unwanted at birth (or decimated in the wombs!), neglected during childhood and adolescence, victim of dead customs and traditions, poverty, ignorance, death, disease and hunger, her SURVIVAL is at stake. She needs PROTECTION from abuse and exploitation. She works and works all day following her mother in the farm or the field, doing domestic chores in her own homes and other houses, fetching fodder, fuel and water, tending cattle, siblings and the sick. All work and no play. If she

manages to survive, she is malnourished, weak and anaemic and goes through the grind of unsafe, early motherhood, low birth weight babies, loss of babies, recurrent pregnancies, further debilitation and low productivity. She often has poor self esteem and is likely to perpetuate the same when, as a mother, she socializes her own young daughter. The cycle goes on.

Socio-Legal Framework

India has several constitutional and legal provisions for safeguarding and promoting the interests of children and women. The State is enjoined to provide free and compulsory education to all children upto the age of 14 (Article 45). The State is further committed to raising the nutritional levels, health and living standards of the people (Article 47). Children below 14 years of age cannot be employed in several categories of hazardous work. (The Employment of Children Act 1938, The Factories Act 1948 amended in 1949, 1950, 1954, The Beedi and Cigar Workers Act 1966). The Children (Pledging of Labour) Act 1933 aims at eradicating the evil of pledging labour of young children by their parents to employers in lieu of loans or advances. The Child Marriage Restraint Act of 1929 was amended in 1976, to raise the minimum age of marriage for girls from 15 to 18 years and for boys from 18 to 21 years.

In consonance with the spirit of the Constitution, Universalization of Elementary Education (UEE) for all children between the ages of 6 and 14 years was planned, consisting of five years of primary and three years of upper primary education. In addition, there was a very small complement of pre-school education. The National Committee on Education of

Women (1959) made a complete assessment of girls' education in the country and impressed on the State to look at this problem as very special needing urgent attention. The recommendations of this committee have since guided educational programmes for girls including undifferentiated curricula and home science as a compulsory subject for both boys and girls in Classes VI and VII. In the first three Five Year Development Plans, girls' education received distinct emphasis in the form of special component plans for which separate allocations were made. This was discontinued in the Fourth Five Year Plan. However, each plan document highlighted the issue of girls' backwardness in education at all levels, suggesting ways and means for improving their participation and performance. The National Plan of Action for Women, 1973, also highlighted the need to pay special care to the education of girls. Various committees and commissions set up by the Government of India from time to time stressed the need to accelerate the progress of girls' education. It was, however, in 1978 that the Working Group on Elementary Education gave startling findings that three-fourths of the non-enrolled children were residing in nine states of India and girls formed two-thirds of these non-enrolled children and also had higher drop out rates than boys. The obvious conclusion was that the goal of UEE (set for 1960) was eluding us on account of low enrolment and low retention of girls and other disadvantaged children in schools. As a large number of these boys and girls could not attend school full time, a complementary scheme for Non-Formal Education was designed and gave 90 10 matching grant for all girls' centres. In

addition, an attempt was made to open more schools closer to where girls lived and special incentives like free uniforms and attendance scholarships were planned for girls in addition to free books, stationery, noon meals for Scheduled Caste and Scheduled Tribe children.

The National Policy on Education, 1986 considers education for women's equality as a vital component of the overall strategy of securing equity and social justice in education.

Excerpts from the National Policy on Education are reproduced below.

Education will be used as an agent of basic change in the status of women. In order to neutralize the accumulated distortions of the past, there will be a well-conceived edge in favour of women. The National Education System will play a positive, interventionist role in the empowerment of women. It will foster the development of new values through redesigned curricula, textbooks, the training and orientation of teachers, decision-makers and administrators, and the active involvement of educational institutions. This will be an act of faith and social engineering. The Women's Studies will be promoted as a part of various courses and educational institutions encouraged to take up active programmes to further women's development.

The removal of women's illiteracy and obstacles inhibiting their access to, and retention in, elementary education will receive overriding priority, through provision of special support services, setting of time targets, and effective monitoring. Major emphasis will be laid on women's participation in vocational, technical and professional education at different levels. The policy of non-discrimination will be pursued vigorously to eliminate sex stereotyping in vocational and professional

courses and to promote women's participation in non-traditional occupations, as well as in existing and emergent technologies.

The National Core curriculum besides being *undifferentiated* for both sexes emphasized core values such as *equality between the sexes, ending social evils and practices derogatory to women, small family norm, democracy, secularism, national integration, conservation and protection of environment, etc*. The girl child issue was very much alive in education and the NPE and its Programme of Action (POA) highlighted the need to improve the social, nutritional and health status of girls and also strengthen support services such as drinking water, fodder, fuel and Early Childhood Care and Education (ECCE) as an integral complement of UEE. Till NPE, education was the only department which collected and compiled gender disaggregated statistics, thereby, keeping the concern for girls' education in the forefront of national policies on women and children. The POA, further, emphasized the need to revise textbooks to remove gender bias and gender sensitize all educational personnel so that equality between the sexes could be internalized through gender sensitive, gender inclusive curriculum and its transaction.

The other major child development programmes, viz Integrated Child Development Service (ICDS) which covers more than thirteen million children in *Aanganwadis* (Child Centres located within the habitation) continued to adopt the gender neutral approach and did not collect gender statistics. Even the National Nutrition Bureau (NNB) did not have

genderwise breakdown on nutritional status and programmes for children till recently. Only some micro studies highlighted the plight of the girl child in the areas of nutrition and health.

The situation of the girl child is a reflection of the status accorded to women in any society. The girl child of today is the woman of tomorrow and the woman of today is the girl child of yester-years. Any issue relating to the girl child has necessarily to be looked at in the overall context of the status, prestige, privileges accorded to women in any society. Theoretically, Indian women enjoy complete equality with men and *more*.

The Constitution of India not only grants equality to women but also empowers the State to adopt measures of protective discrimination in favour of women for neutralizing the cumulative socio-economic, educational and political disadvantages faced by them. The Fundamental Rights, among others, ensure equality before the law, equal protection of law, prohibits discrimination against any citizen on grounds of religion, race, caste, sex or place of birth, and guarantees equality of opportunity to all citizens in matters relating to employment. Article 14 confers on men and women equal rights and opportunities in political, economic and social spheres, while Article 15 prohibits discrimination against any citizen on the grounds of religion, race, caste, sex, etc. Article 15(3) makes a special provision enabling the State to make affirmative discrimination in favour of women. Similarly, Article 16 provides for equality of opportunities in matters of public appointments for all citizens. Article 39(a) further mentions that the State shall direct its policy towards

securing for all citizens, men and women, equally, the rights to means of livelihood, while Article 39(c) ensures equal pay for equal work. Article 42 directs the State to make provision for ensuring just and humane conditions of work and maternity relief. Above all, the Constitution imposes a fundamental duty on every citizen through Articles 15(a) and 15(e) to renounce practices derogatory to the dignity of women.

Special legislations have been enacted to make this *de-jure* equality into a *de-facto* one. The State has enacted the following women-specific and women-related legislations to protect women against social discrimination, violence and atrocities and also to prevent social evils like child marriage, dowry, rape, practice of Sati, etc. The Equal Remuneration Act of 1976 provides for equal pay to men and women for equal work. The Hindu Marriage Act of 1955 amended in 1976 provides the right for a girl to repudiate a child marriage before attaining maturity whether the marriage has been consummated or not. The Immoral Traffic (Prevention) Act of 1956 as amended and renamed in 1986 makes the sexual exploitation of male or female, a cognizable offence. An amendment brought in 1984 to the Dowry Prohibitions Act of 1961 made women's subjection to cruelty a cognizable offence. The second amendment brought in 1986 makes the husband or in-laws punishable, if a woman commits suicide within seven years of her marriage and it has been proved that she has been subjected to cruelty. Also, a new criminal offence of 'Dowry Death' has been incorporated in the Indian Penal code. The Child Marriage Restraint Act of 1976 raises the age for marriage of a girl to 18

years from 15 years and that of a boy to 21 years from 18 years and makes offences under this Act cognizable. The Factories Act of 1948 (amended upto 1976) provides for establishment of a creche where 30 women are employed (including casual and contract labourers). The Medical Termination of Pregnancy Act of 1971 legalizes abortion by qualified professionals on humanitarian or medical grounds. Amendments to Criminal Law 1983 provide for a punishment of seven years in ordinary cases of rape and 10 years for custodial rape cases. The maximum punishment may go upto life imprisonment. A new enactment of Indecent Representation of Women (Prohibition) Act of 1986 and the commission of Sati (Prevention) Act, 1987 have also been passed to protect the dignity of women and prevent violence against them as well as their exploitation.

The passing of the Panchayati Raj Act (72 and 73 amendment) in 1992 will return power to the people and is a major step towards participation of women in the political and grassroots development processes. Not less than 30 per cent of the elected Panchayati members at the village, intermediate and district levels will be women, as also not less than 30 per cent of the Sarpanches (Chairpersons) of these local bodies will be women. Similar provision will be made for the participation of women in urban local self-government. In several states, women enjoy reservation of seats in government sector jobs to the tune of 33 per cent to 50 per cent. Likewise, one-third to 40 per cent of the beneficiaries of poverty removal/employment generation/rural development/cottage industries, etc., have to be females. There are now several socio-economic

development and awareness generation programmes, including provision for short-stay homes and free legal aid and counselling available for women.

The late 1980s, was also a period of assessment of the impact of the UN Development Decade for Women, around the world. It is pertinent to recollect that compelled by the highly negative findings of the 1971 Census on the declining sex ratio and female work participation rates and higher female mortality rates, lower literacy and schooling, feeble participation in political decision making—all led to the setting up of the Committee on Status of Women in India (CSWI) which placed its report *Towards Equality* before the nation in 1974, a little before the International Year for Women. *This report not only threw up critical data but also revived the women's movement in the country with middle class urban professional women taking up issues of rural and urban women in the unorganized sector and acted as a major mobilizing force for change of laws and passing of new laws*

The Girl Child Focus

The UN Women's Development Decade (1975-85) played a major role in raising issues of women's status in national and international forums, and led to the setting up of national focal points for the development of women and children. In India, a Department of Women and Child Development was set up in 1985 in the Ministry of Social Welfare, and was transferred later to the newly set up Human Resource Development Ministry. It was realized in the late eighties that most of the central issues of the Development Decade veered around adult women and there was a need to look at

the problems of girls, right from infancy to adolescence separately. Further, it was clear that the gender neutral approach to child development programmes like UEE and ICDS was not giving the necessary dividends. The National Policy on Education, 1986, also emphasized "Education for Women's Equality", subsuming the category girl in women.

For good reasons, a girl child and her plight as the *Lesser Child* was brought into sharp focus by scholars and activists belonging to governmental, non-governmental and international organizations. A large amount of sponsored research on educational and health issues of the girl child was generated by the government through its specialized agencies such as NCERT and NIEPA in the post-NPE 1986 period. The Department of Women's Studies brought out several studies on the girl child and drew the attention of the policy planners to the particularly disadvantaged situation of the Rural Girl Child. *These policy studies served the purpose of political mobilization and along with several other such efforts succeeded in getting the rural girl child a special focus in the Eighth Five Year Plan and the Revised NPE and POA of 1992.* A large number of schemes focussing on the specific needs of girls belonging to disadvantaged groups were formulated to include free education upto higher secondary level, special incentives like free uniforms, attendance scholarships, hostels for girls in rural areas, providing every primary school with at least one women teacher, separate toilets, among others.

As a culmination of this concerted effort, the year 1990 was declared as the SAARC (South Asian Association for

Regional Cooperation) Year of the Girl Child The enthusiastic response to the issues concerning the girl child in 1990, resulted in the declaration of the 1990s as the SAARC Decade of the Girl Child by the Heads of Governments and States This was a conscious attempt to maintain the tempo and drive of various activities initiated in the region during the Year of the Girl Child The National Plan of Action for the SAARC Decade of the Girl Child 1991-2000 A.D. has three major goals of SURVIVAL, PROTECTION and DEVELOPMENT of the Girl Child in India while emphasizing the needs of the girl children belonging to special and vulnerable groups and adolescent girls This plan visualizes the cooperation and support of both governmental and non-governmental organizations for its successful implementation and for sustaining the consciousness regarding the rights of the Girl Child with a view to giving her a brighter future. Urgent need is felt to reduce the existing disparities and ensuring equality for the development of the girl child/adolescent girl. To achieve this equality we will have to ensure that :

- she has the right to survive;
- she has the right to be free from poverty, hunger, ignorance and exploitation;
- she has the right to equality, dignity, freedom, opportunity, care, protection and development, and finally
- she has the right to enjoy the above rights

Rights can be declared and policies can be formulated to express our collective liberal and humanistic concerns, but unless the real life of the girl child in her family and the community is touched by tangible efforts and actions, nothing can be achieved.

Therefore, a climate has to be created in which she can exercise her rights freely and fearlessly. One has to work for the transformation of those social and cultural values that shackle and constrict the girl child and mould her into stereotypical roles. For this, every forum and every platform should be used to create awareness and stimulate positive action. Along with this, effective implementation of the laws for protecting her and provision of opportunities for her to benefit from them have to be ensured (*National Plan of Action for SAARC Decade of the Girl Child 1991-2000 A.D.*)

As is evident, there is a clear mandate for social mobilization to change the social and cultural practices that inhibit the development of the girl child For planning suitable strategies and interventions, it would be necessary to briefly review the present factual position regarding the girl child and the existing efforts at social mobilization

PRESENT SITUATION

In a population of 846 million in India, there are only 407 million females compared to 439 million males. Males outnumber females by 32 million (1991 Census).

Declining Sex Ratio

Measured as the number of females per thousand males, the sex ratio is a powerful indicator of women's overall status. Women outnumber men in most countries on account of being stronger of the two human species. This is despite the fact that sex ratio is favourable to males at birth, 102 to 107 male babies are born per 100 female babies. In India, the sex ratio is not only adverse to females but has declined tremendously from 972 in 1901 to an all time low of 927 in 1991. *Between every census, millions of females disappear*

Table 1
Sex ratio — India (1901-1991)

Census Year	Sex Ratio
1901	972
1911	964
1921	955
1931	950
1941	945
1951	946
1961	941
1971	930
1981	934
1991	927

Census of India, 1991,
Final Population Totals

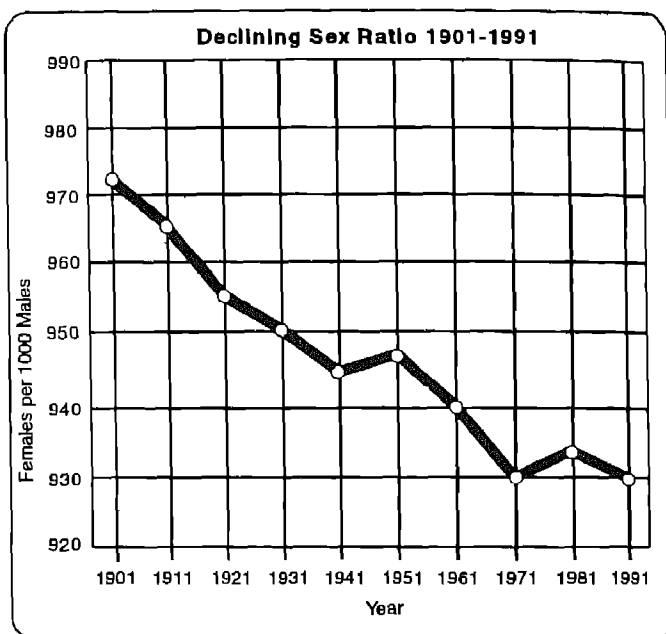


Figure 1

More alarming than the overall situation is the fact that while the sex ratio for all population fell by eight points during 1981-91, in the age group 0-6 years this has declined much more sharply from 962 to 945, i.e. by 17 points. Out of the total number of 466 districts in 1991, there are ten districts, four each in the most prosperous states of Haryana and Punjab, and one each in Madhya Pradesh and Tamil Nadu where there are more than 1150 boys to 1000 girls. There are another 55 districts where there are 1100-1150 boys per 1000 girls among children below six years. The sex ratio ranges from 865 in Haryana to 1040 in Kerala among the fifteen major

states (accounting for 96 per cent of the total population). Of the 44 districts with sex ratio of less than 850, half are in Uttar Pradesh alone. Barring Jaisalmer and Jind, all districts of Haryana, Uttar Pradesh, Rajasthan and Madhya Pradesh form a continuous belt of sex ratio below 850 (Nayar, 1993). There is a highly localized incidence of sex ratio of 1000 and above in all districts of Kerala, Dakshin Kannada in Karnataka; hill districts of Uttar Pradesh, Hamirpur, Kangra, Una, Mandi and Bilaspur in Himachal Pradesh, in the compact tribal tracts of Madhya Pradesh, Orissa and Andhra Pradesh, and in five southern districts of Tamil Nadu (Ibid.)

TABLE 2
Population of Age Group 0-6 Years in India
(in million)

Area	Person	Males	Females
All areas	150.42	77.32	73.10
Rural	116.83	69.96	56.87
Urban	33.59	17.36	16.23

Source : Census of India 1991

Higher Female Morality

Females suffer greater loss of life in all age groups from birth to the age of 34 years, with the trend reversing after

that The age specific death rates for rural areas are twice as high as those for children below four years in urban areas (See Table 3)

Estimated Age (by Sex) Specific Death Rates in India (1990)

Age Group	Rural			Urban			Combined		
	Male	Female	Person	Male	Female	Person	Male	Female	Person
0-4	35.1	39.1	35.7	18.1	18.7	18.7	31.8	34.9	33.3
5-9	3.5	3.9	3.6	1.6	1.8	1.7	3.0	3.4	3.2
10-14	1.6	1.8	1.7	0.7	1.2	0.9	1.4	1.7	1.5
15-19	2.0	3.1	2.5	1.1	1.6	1.3	1.8	2.8	2.2
20-24	2.5	3.4	3.0	1.8	2.7	2.2	2.3	3.2	2.8
25-29	2.5	3.3	2.9	1.9	1.7	1.8	2.4	2.9	2.6
30-34	3.0	3.5	3.2	2.6	2.1	2.4	2.9	3.2	3.0
35-39	4.6	3.8	4.2	4.1	2.5	3.4	4.5	3.5	4.0
40-44	6.8	4.7	5.8	5.0	3.4	4.2	6.4	4.4	5.4
45-49	9.4	6.7	8.1	7.8	5.5	6.7	9.0	6.6	7.8
50-54	14.0	10.6	12.3	14.3	9.2	11.9	14.0	10.3	12.2
55-59	20.4	15.8	18.2	21.9	16.6	19.4	20.7	16.0	18.4
60-64	33.9	27.1	30.4	30.8	22.4	26.6	33.2	26.1	29.7
65-69	51.1	40.6	45.7	48.1	36.0	41.9	50.5	39.7	45.0
70 +	100.81	88.1	94.3	100.9	84.0	91.7	100.9	87.3	93.8
All age	11.9	12.0	12.0	7.9	7.4	7.7	11.0	11.0	11.0

Source : Registration System, Registrar General, India, Health Information of India 1991, Ministry of Health and Family Welfare

Causes for higher female mortality range from female foeticide, female infanticide, to a conscious neglect of health and nutritional needs of a female from birth, through adolescence to youth. Early marriage, unsafe motherhood, lack of medical attendance at childbirths, poor health and development infrastructure, illiteracy and discriminatory socio-cultural values and attitudes, beliefs and practices compound the already precarious condition of females, especially in large parts of rural India where three-quarters of our population lives. Excess of female mortality over males by age two and five is prominent in low sex ratio districts/regions. (Nayar, 1993, Nuna, 1990)

Early Marriage

The legally stipulated age at marriage for women and men is 18 years and 21 years respectively. Female mean age at marriage has risen from 13.1 years in 1901 to 19.3 years (19 years in rural and 21 years in urban areas) in 1990, and ranges from 18 years in Uttar Pradesh, Bihar, Andhra Pradesh, Karnataka and Rajasthan to 22 years in Kerala. Studies show a positive correlation between the education and the age at marriage of females (Nayar, 1993).

The incidence of child marriage (below 14 years) has declined appreciably, from 22 per cent in 1961 to 7.82 per cent in 1981 among rural female and from 6.79 per cent to 2.17 per cent among urban females. The inter-state variations however, range from a high of 18.31 per cent in Rajasthan to a low 0.30 per cent in Kerala. In 1981, nearly two million female children below the age of fourteen were found married. The proportion of married females in the age group 15-19 years declined for both

rural and urban females. The inter-state variations range from a high of 17.88 per cent in Madhya Pradesh to 14.13 per cent in Kerala for this age group.

Studies show that the expenditure on the treatment of girls is often less than half that of boys. As a consequence of low valuation of females at birth, the childhood and adolescence of girls is filled with misery. The sudden upswing of female deaths in the age group 15-19 years bears testimony to the high mortality rate of teenage mothers. The sex ratio drops from 975 in 0-4 age group to 944 in the 5-9 age group to 912 in the 15-19 age group (Unicef, 1990).

For rural Indian girls, adolescence can at best be defined as the period which starts with the premature end of education and premature start of pregnancy and child-bearing. A large proportion of these girls aged 10-16 years are pushed into early marriage and are at obstetric risk and give birth to low-weight babies. (Ibid.)

The Invisible (Girl) Child Labour

According to the 1981 Census, there were 23.59 million working children in India. The National Sample Survey found 17.36 million working children and using a different yardstick, the Operations Research Group (Baroda) estimates 44 million working children in the country who belong to rural and urban poor. The girl child is very often the invisible worker and the family drudge and therefore misses out on schooling. In urban areas there is a higher percentage of boys engaged in non-household industries compared to girl workers. Nearly half of the female child workers in urban areas are engaged in household industry.

Poverty

Rural poverty is severe. Whereas, 37.4 per cent of the population, 51 per cent in rural areas and 40 per cent in urban areas, was below the poverty line during 1983-84, this proportion has come down considerably in 1987-88 as only 29.2 per cent of the population was below the poverty line, and in rural areas their share was one-third. Even so, the number of absolute poor was more than 232 million of which the rural poor accounted for about 200 million. Bihar, Madhya Pradesh and Orissa have more than 40 per cent of their rural population below the poverty line; Uttar Pradesh, Karnataka, Maharashtra and Tamil Nadu have more than 35 per cent population who are absolutely poor. In Andhra Pradesh and West Bengal, more than 30 per cent people live below the poverty line, a quarter in Assam. Only six states have less than 20 per cent rural population below the poverty line and three states namely, Punjab, Haryana and Gujarat have less than 11 per cent rural population below the poverty line.

Poverty pushes children to work when they should be in school. The implications are manifold as in poorer households, the *burden of poverty and male unemployment is shifted to women and girls, who often work to keep sons and brothers at school and get the residue of the family's food, health and education resources*. In the absence of primary and middle schools in the village itself, and poor roads and means of transport, rural girls are shut out of the education system totally, or drop out soon after joining. Fetching water, fodder and fuel are female tasks, as also all domestic work, child care and animal care.

Female literacy is considered to be a more sensitive index of social development than overall literacy rates. Female literacy is negatively related with fertility rates, population growth rates, infant and child mortality rates and shows a positive association with female age at marriage, life expectancy, participation in modern sectors of the economy and above all female enrolments.

TABLE 4
Literacy Rates

Year	Person	Males	Females
1951	18.33	27.16	8.86
1961	28.31	40.40	5.34
1971	34.45	45.95	21.97
1981	43.67	56.50	29.85
1991	52.19	64.20	39.19

Source : Census of India, 1991
Final Population Totals, 1991

Female Participation by Educational Levels

Girls form 40 per cent of all students in the educational system. However, their proportion goes down with every successive higher level. They form 46 per cent of the enrolments at the primary stage, 38 per cent at the upper primary stage, 34 per cent at the secondary and 32 per cent at the higher secondary level.

There is tremendous increase in the

Table 5
All India Enrolment by Stage / Class (1991-92)
 (Figures in 000)

<i>Stage</i>	<i>Total</i>	<i>Girls</i>	<i>Percentage of Girls Enrolment</i>
Pre-primary / Pre-basic	1436	639	44.52
Primary / Jr. Basic (I-V)	101577	42359	41.70
Middle / Sr. Basic Classes (VI-VIII)	34446	12997	37.73
High / Post Basic (IX-X)	15028	5050	33.60
Higher Sec. / Intermediate Jr. Colleges (XI-XII)	6200	1994	32.16
Technical / Industrial Arts and Crafts	431	86	19.91
Polytechnic Institute	280	34	11.99
Teacher Training School	125	62	49.26
MBBS	83	29	34.75
B Ed. / B.T.	97	44	45.53
B E / B.Sc. (Engg) / B.Arch.	230	20	8.68
B Com / B Com (Hons.)	1079	278	25.77
B Sc. / B Sc (Hons.)	741	231	31.13
B A / B.A (Hons.)	1693	675	39.87
M Com	89	17	19.29
M.Sc.	78	26	33.47
M A.	214	80	37.52
Ph D / DSC / D. Phil.	31	10	33.09
INDIA	163859	64631	39.44

Source . Selected Educational Statistics, Department of Education, MHRD, New Delhi, 1993; Nayar, 1993b

participation of girls at all levels of education. The participation of girls in diploma level technical education is about 20 per cent in technical industrial, arts and crafts courses and only 12 per cent in polytechnics. Girls form nearly half of those receiving primary teacher training. In higher education, women form about 40 per cent of the Arts students, about a third of the Science students and one-third of the Doctoral students. Commerce education is emerging as another strong area with women forming a quarter of the

graduate level and a fifth of the post graduate students. In the three major professional courses at the first degree level, women form 45 per cent of the B.Ed. students, 35 per cent in MBBS but a poor 9 per cent in B.E./B.Sc. (Engg) /B.Arch. (Nayar, 1993b).

Universalization of Primary Education (UPE)

The Constitutional commitment (Article 45) to provide free and compulsory

TABLE 6
**Enrolment Ratio of Girls at the Elementary Stage by States/UTs Ranked by
 Female Literacy Rate Per Cent in 1991**

Rank	State/UT with literacy rate greater than 50 per cent	Literacy rate 1991		Index of gender equality	Enrolment ratio 1991-92			
		Female	Male		Primary Boys	Girls	Upper primary Boys	Girls
Group A States								
1	Kerala	87	94	96	100	98	106	104
2	Mizoram	78	84	93	140	133	76	73
3	Chandigarh	74	83	94	61	59	57	57
4	Lakshadweep	71	87	93	157	135	118	97
5	Goa	68	86	89	106	97	112	96
6	Delhi	68	83	89	87	88	83	80
7	A & N Islands	66	80	89	100	85	88	76
8	Pondicherry	66	84	88	148	136	135	117
9	Daman & Diu	61	86	83				
10	Nagaland	56	66	96	114	104	70	68
11	Himachal Pradesh	52	75	83	125	109	125	96
12	Tamil Nadu	52	75	82	142	128	109	86
13	Maharashtra	51	75	80	132	119	92	67
14	Tripura	50	70	83	144	122	90	71
15	Punjab	50	64	87	102	95	79	66
Group B States (40-50 per cent)								
16	Manipur	49	73	80	117	104	67	59
17	Gujarat	49	73	80	142	111	85	59
18	West Bengal	47	67	82	140	108	74	56
19	Sikkim	47	64	84	127	113	49	48
20	Meghalaya	45	52	93	67	63	64	54
21	Karnataka	44	67	79	115	107	66	47
22	Assam	44	62	82	117	109	69	55
23	Haryana	41	65	74	94	79	75	51
Group C States (below 40 per cent)								
24	Orissa	34	62	71	120	87	65	38
25	Andhra Pradesh	34	56	75	123	95	71	43
26	Arunachal Pradesh	29	51	71	128	91	57	37
27	Madhya Pradesh	28	57	65	119	89	74	36
28	D & N Haveli	26	52	65	116	87	56	35
29	Uttar Pradesh	26	55	63	105	67	68	33
30	Bihar	23	53	60	105	56	53	21
31	Rajasthan	21	55	54	107	50	66	23
32	Jammu & Kashmir	-	-	-	102	71	76	47

From : Usha Nayyar 1993, *Universalization of Primary Education of Rural Girls in India*, NCERT, New Delhi.

Source:

1. Literacy figures are from Statistical Database for Literacy National Institute of Adult Education, New Delhi, 1992
2. Enrolment data is from *Selected Education Statistics, 1990-91*, Department of Education, Ministry of Human Resource Development, New Delhi, 1993

education to all children upto the age of fourteen years within ten years of its promulgation remains unfulfilled. This is largely on account of the inability of the system to enrol and retain girls. The enrolment ratio has gone upto 116.1 per cent for boys but is only 88.09 per cent for girls. At the upper primary level, girls' enrolment ratio is only 47.4 per cent compared to 74.19 per cent for boys in 1991-92 (Departmental Statistics). Rural-urban divide is the sharpest among girls at the school stage and higher education is a purely urban phenomenon. Few rural girls make it to secondary and higher education.

As gross enrolment ratio includes an estimated 25 to 30 per cent overage and underage children, it would take considerable time to reach the net enrolment ratio of 100 in the age group 6-14 years; Kerala's figures are closer to the net enrolment ratio where the phenomenon of overage/underage children is low with nearly all children entering school at six and completing the primary cycle with small wastage rates.

The inter-state disparities are wide. High female literacy states (above 50%) have universalized primary enrolment among girls with the exception of the Union Territory of Chandigarh. Kerala, Goa, Pondicherry and Lakshadweep fare very well on upper primary enrolments among girls. The gender gap is minimal in Delhi, Chandigarh, Mizoram and even Meghalaya.

In Group B states (female literacy 40-50 per cent) the situation of girls' enrolment appears to be satisfactory at the primary level but there is a steep fall at the upper primary level where the gender gap is also very high.

The situation in Group C states (female literacy 20-40 per cent) is grave especially in Uttar Pradesh, Bihar, Rajasthan and Jammu & Kashmir at the primary level. At the upper primary level, Uttar Pradesh, Rajasthan and Bihar fare the poorest. It is pertinent to point out that Group C states form more than half of the country's population (with 40 per cent population living in four states, namely, Uttar Pradesh, Bihar, Madhya Pradesh and Rajasthan).

Drop Out Rates and Retention

The drop out rates are steadily falling but continue to be higher among girls compared to boys (See Table 7)

TABLE 7

Drop Out Rates in 1980-81 and 1988-89

Class	Sex	1980-81	1988-89
Class I-V	Boys	56.2	46.7
	Girls	62.5	49.7
	Total	58.7	47.9
Class I-VIII	Boys	68.0	59.4
	Girls	79.4	68.3
	Total	72.7	65.4

Source : MHRD, *Education for All*, 1993

A rough measure of retention is enrolment in Classes V and VIII as percentage of Class I at any given point of time. The all India figures show that enrolment in Class V as percentage of students in Class I was 45.06 and gets reduced to 25.35 in Class VIII (1986-87). For every 100 girls in Class I in rural and urban areas respectively, there are only 40 rural girls compared to 65 urban

girls in Class V and only 18 rural girls and 52 urban girls in Class VIII. In Class XII, this percentage is reduced to 1.44 for rural girls compared to 14.04 per cent for urban girls. The inter-state variations are large. The high female enrolment States of Kerala and Punjab, for instance have more number of girls in Class II compared to Class I at the moment (Nayar, 1993.)

Causes for High Drop Out of Girls

The reasons for high drop out among girls given by the parents, the community, the girls themselves, the educational practitioners, are poverty, early marriage, helping parents with housework and agricultural work, unattractive school environment, parents' illiteracy and indifference, lack of a positive educational climate, neglect of studies leading to repeated failure and finally, withdrawal from school. Girls join very late and are withdrawn with the onset of puberty. Parents do not see any benefit in girls continuing in school and are in a hurry to marry them off so that a liability is shed.

Social Mobilization

India has a long track record of social mobilization for fighting injustice and ending oppressive religious tenets and customs. In the nineteenth century, a primarily male-led social reform movement put an end to inhuman social practices like untouchability, Sati, female infanticide, child marriage, bonded labour, sub-human working conditions, especially those affecting women and children. Several laws with far reaching implications were passed by the British rulers. Sati was banned in 1820. *Widow remarriage* was legalised in 1856.

Registration of all births and deaths was made compulsory in 1870 to check the instance of female infanticide. The *Child Marriage Restraint Act*, Popularly known as Sarda Act, fixed the minimum age at marriage at 15 years for girls and 18 years for boys. Education of women was a major tool for raising the status of women within the framework of the institution of the family. (Nayar, 1988)

Girls' education was promoted largely through private efforts, initially by Christian Missionaries and subsequently by a large number of denominations within and outside the reformed Hindu church. The Indian social renaissance owes gratitude to stalwarts like Raja Ram Mohan Roy, Jyotiba Phule, Savitri Phule, Dayanand Saraswati, Ishwar Chandra Vidyasagar, Vivekanand, Pandita Rama Bai Bharathi, who championed the cause of Indian womanhood. Schools for girls and training institutions for women teachers were set up by Arya Samaj, Dev Samaj, Khalsa Diwan, Prarthna Samaj, Theosophical Society of India, Rama-krishna Mission, Sanatan Dharam Sabha. (Ibid.)

The freedom struggle, a major phase of mobilization of people began full stream in 1987 and grew into a full-fledged national movement for overthrowing British rule. This movement acquired a mass character under Gandhi who mobilized men and women from all walks of life, from all regions of India. Besides several outstanding women like Laxmi Bai of Jhansi, Begum Hazrat Mahal, Annie Besant, Pandita Rama Bai, Kasturba who came into the limelight, there were thousands whose deeds of valour and courage helped the country fight its battle for independence. Indira Gandhi, not yet in her teens, formed and led a children's

brigade who carried secret messages for leaders. The All India Women's Conference was born in 1916.

On independence, a constituent assembly, in which fourteen illustrious women participated, gave the country a Constitution in keeping with the progressive events of the preceding century and a half, aiming at ensuring equality, freedom, justice and human dignity. *This very forward looking Constitution has, since independence, provided the basic framework for social policies, social action and legislative measures for achieving its goals*

In post-independence India, socio-economic development planning became a major vehicle for raising the quality of life of people within the framework of growth and equity. We have discussed earlier, how women's concerns and that of the girl child in particular emerged more strongly since the 1971 Census and gave a jolt to the now dormant women's movements in India. At this point, the State took the initiative to appoint a comprehensive committee on the Status of Women which gave a major push to the women's movement. The State also set up separate structures for promoting women's development moving from welfare orientation to women's empowerment. Both liberals and feminists, had impact on government policies and programmes and created a strong pressure for new and reformed legislative measures. It is also interesting to note that women's organizations and other voluntary organizations are partners with the government as a large number of schemes for women and children are implemented through them.

There are numerous successful

examples of social mobilization in sectors like agriculture and dairying, where improved practices, techniques and technologies were accepted and utilized. This, however, did not lead to rural development automatically. In the late seventies the Integrated Rural Development Programme (IRDP) was conceived by the State for mobilizing rural people for economic self-reliance. Under IRDP, Development of Women and Children in Rural Areas (DWCR) is another state initiative to organize women in every village and *Mahila Mandals* (Women's Groups) for generating social action for utilization of existing schemes for women and children and for generating new demands. The *Mahila Mandals* need to be extended to a large geographical span and strengthened in their functioning. Few *Mahila Mandals* are really effective. Besides these *Mahila Mandals*, there are more than 1600 voluntary organizations, many exclusively for women, that are active.

Another positive example of social mobilization is the universalization of immunization of children and expectant mothers. This has been done in a systematic campaign mode with immunization drives, camps, advocacy and media support. There is also the family planning programme (renamed family welfare) where campaigns and forced targets boomeranged and have led to a rearray of strategies to include greater participation of women in the management of this programme and to remove the gender discriminatory approach of choosing women as the *main targets*.

Some of the outstanding examples of social mobilization on issues concerning women and girls are :

1. Maher, Matru Prabhodan, Savitribai Phule Dattak Yojna (Foster Parent Scheme) for girls. The former two were aimed at mobilizing women for girls' education and for changing cultural attitudes and values inhibiting education of girls. The foster parent scheme is a bid to mobilize the community to help girls from indigent groups to complete elementary education. All three programmes were initiated by Directors of School Education. The first two schemes were discontinued after the retirement of these educational leaders. The Savitri Bai Phule Scheme continues with hundreds of thousands of girls benefiting from it all over Maharashtra. Some other states have also adopted this scheme. There is a lot to learn from Maher and Matru Prabhodan and these need to be revived.
2. Sewa (Self Employed Working Women's Association) has mobilized and organized women in the unorganized sector, the petty vendors, piece wage earners, small traders. The work of this organization compelled the Government to set up a committee on women in the unorganized sector which submitted its report *Shram Shakti* in 1987.
3. Several leading women's organizations, N.G.O.s, Centres for Women's Development Studies (a research action group), YWCA, Jagriti, Centre for Women's Research, Manushi, Jagori, Joint Women's Programme, Mahila Dakshata Samiti, Ankur, Karmika, Stree Mukti Morcha, Chetna, Kali for Women, Advocacy Group, among others, have constantly kept vigil. Jointly, they have managed to rivet public attention and the media on issues like dowry deaths, rape of minors and custodial rapes, indecent representation of women in the media, sexual harassment, eve teasing, molestation of girls, etc. A single instance of Sati in Deorala in Rajasthan when Roop Kanwar, an 18-year-old girl was burnt on the funeral pyre of her husband, sent shock waves and protest and finally led to the passing of the 1987 Sati Prevention Act. The National Perspective Plan for Women 1988-2000 (NPP) initiated by the Department of Women and Child Development, was vetted by representatives of women's organizations and leading research centres. The NPP, among others, recommended 30 per cent reservation for women in all jobs, all schemes, all educational and training institutions, and in all political decision making bodies, from the local to the national level. These reservations are applicable in many states in government sector jobs and schemes and now in the Panchayati Raj framework (local self governance). A similar reservation is being proposed for all central services.
4. Women's Development Programme (WDP) in Rajasthan and *Mahila Samakhya* of the Department of Education in the MHRD are major initiatives by the State aimed at the empowerment of women through consciousness raising, collective, action and reflection. Both these programmes created a demand for girls' education. Awareness generation and advocacy campaigns for girls' education and health have been

carried over by the Department of Education and Department of Women and Child Development through national organizations like the NCERT, National Institute of Public Cooperation and Child Development (NIPCCD) and SCERTs

5. **The Total Literacy Campaign (TLC)** now covering more than 200 low female literacy districts is a major social mobilization programme carried out by district administrators in close conjunction with people and NGO's. TLC covers a variety of women's issues, not only emphasizing the three R's but giving the neo-literates tools to successfully negotiate with their environment, social, economic and political, through a process of critical conscientization. This is achieved through voluntary helpers, trade union members, insurance agents, ex-army and police personnel, etc. TLC has contributed to the liberation of women by empowering them through literacy, eliminating middle men, helping them to organize themselves to fight social abuses like local liquor brewing and family violence, and to exercise their right to vote and contest elections. A major impact of TLC is felt in the tremendous boost in the demand for primary education for children. Women and girls form the bulk of the learners and appear more motivated and eager than men. (Adisheshiah, 1993)
6. **Recent Education for All initiatives** in the country focus primarily on primary education of girls and empowerment of women. The Bihar Education Project, the Uttar Pradesh Basic Education Project, Lok Jumbish in

Rajasthan, District Primary Education Programme (DPEP) in 43 districts in eight states currently, are all zeroing in on (a) accessing education to girls in the real sense of the word, (b) removing gender bias from educational planning, curriculum transaction and teacher education, (c) community mobilization to do away with cultural practices, 'taboos', beliefs that are discriminatory to girls and women, and (d) gender sensitization of all educational personnel, communities and parents and all elected personnel.

7. **The Girl Child Campaign in Rajasthan** which 'piggy backed' on the Women's Development Programme (WDP) structures and participatory ideology, succeeded in raising awareness on three major issues concerning the girl child viz., child marriage, health, and education. Education of the girl child emerged as a major demand of the parents in the campaign villages. While the campaign was meticulously planned and implemented, post-campaign planning and action appear to be weak.
8. **Education of the girl child** is the focus of all activities of the Department of Women's Studies at the NCERT, which acts as a major catalyst for promoting research and action in the states. Awareness generation and gender sensitization of all educational personnel is the responsibility assigned to this department in addition to acting as the nodal department for Girls' Education India for SAARC. All research and training is focussed on various aspects of girls' education, including development of a positive self image and self confidence

amongst girls. Gender sensitive planning, gender inclusive curriculum and teacher education, mobilizing communities and women for girls' education in partnership with the media are some of the areas of activities of the DWS

Two major programmes for mobilizing the planners, administrators, teachers, the community, parents and women's groups are currently in progress in NCERT. The first is a *UNESCO-sponsored Innovative Pilot Project for Universalisation of Primary Education among Girls in rural areas*. This is a low-cost multi-level integrated training and mobilizing project using research-based local specific materials. So far, over 300 administrators, teacher educators and teachers of the 16 districts of Haryana have been oriented on issues of the girl child and women's empowerment. Preparation is underway for developing advocacy and promotional materials for awareness generation among parents and the community. The second programme includes a set of Gender Studies as inputs into project formulation and implementation in DPEP for ensuring completion of primary schooling for girls and empowerment of women. The DPEP (District Primary Education Programme) is being taken up in 43 low female literacy districts presently and will be expanded to cover 257 such districts in due course. Girls and disadvantaged children are the focal groups for attention and women's empowerment issues are to be dealt with in gender sensitization programme for all educational personnel and the communities. These two programmes are examples of (a) an attempt at mobilization of the personnel within the educational

system at various levels (national, state, district, village) and (b) for mobilizing people to participate in the education of their children. In sum, such programmes can become the major tools for social mobilization for survival, protection and development of the girl child. The success of such programmes will depend on the extent to which these can be made truly inter-sectoral during the advocacy phase and later during the action/implementation phase. For example, we may like to talk about the issues of the health of a girl child, her legal rights, etc. It would be important to network with the concerned department/agency to ensure that TALK is followed by ACTION and CONVERGENCE of services.

There are a large number of agencies which have prepared excellent audio-visual materials, playlets, street plays, films and documentaries, posters and charts, slogans and songs. There are an equally large number of agencies that organize advocacy programmes for different categories of persons. Documentation, cataloguing, dissemination need to be done as also networking among concerned agencies/organizations.

Conclusion

The foregoing analyses of the Indian experience of social mobilization leads us to the following major conclusions

1. Social mobilization can both precede and follow the conscious creation of legal/normative structures. The Indian Reform Movement and Freedom Struggle led to the creation of a constitutional and legal framework which in turn provides ample support for further mobilization.

2. Social mobilization was and is a partnership between people and the State. People's action has compelled the State to ban socio-cultural practices derogatory to girls and women through laws. State action in the 1970s revived the women's movement and in turn the women's groups acted as pressure groups leading to changes in socio-legal frameworks and action.
3. Voluntary action and a sustained women's movement are necessary to generate and support people's action and State programmes. Successful women's development programmes have been able to generate further demand for education of girls and for focusing on other related issues.
4. In India, the situation of a girl child is a direct reflection of the status accorded to women, which varies from region to region and differs on account of caste, class, ethnicity and religion. Social mobilization issues for the Girl Child have to be seen in the overall framework of the status of woman. The important part may be to see the girl and the grown up woman as a continuum. For identifying issues and mobilization strategies, the life cycle approach would be most apt.
5. Social mobilization can be a continual series of advocacy, awareness generation programmes directed at specific groups or this could take on the shape of a well designed campaign and post-campaign (action) phase. Campaigns are needed. These are difficult to organize but the more difficult part is to sustain the motivation and enthusiasm levels generated during the campaigns.
6. Mobilization must be followed by action. Should the approach be gradualist, indirect or frontal? For instance, the Girl Child Campaign in a near-feudal rural setting limited itself to three major issues of child marriage, health and education of girls and succeeded in bringing out the negative impact of child marriage, illiteracy and poor health on the girl herself and her family. Education of girls was seen as the top priority by the village women. The tougher issues of equal property rights, sexual harassment, molestation, dowry deaths, rape, equal share in public and domestic decision-making are yet to be negotiated. An Education (formal and non-formal) and Media combine has to address these tougher areas.
7. Mobilizing all sections of the population is necessary to create for the girl child a social climate conducive to her growth and development. The State has programmes for girls, especially those from deprived groups and out-of-school, adolescent girls, but the State machinery is not gender sensitive. Likewise, male dominated social structures at all levels would militate against any issue which treaded on their interests. Therefore, it is necessary to have a critical mass of men and women committed to gender equality, who are ready to redefine the social roles of men and women, boys and girls to reach the ultimate goal of personhood for all. Role of training of catalysts through participatory, experiential methods is necessary for successful social

- mobilization programmes and campaigns. Gender sensitization of State machineries and elected members at all levels is as important as sensitizing educational and media personnel on issues of the girl child
8. Research on issues of the Girl Child and the strategies and processes that have been employed in various locations, need to be documented and disseminated widely.
 9. India has a rich repertoire of constitutional legal frameworks, policies and programmes and some successful attempts at social mobilization on issues of the girl child. The momentum which is building up should be sustained through continued political commitment and people's action.
 10. And, finally, a world so concerned with preservation of wildlife and biodiversity, should not ignore the fact that in some parts of the world, the girl child may become an endangered species!

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The Girl Child : Some Important Correlates

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Traditionally, there has been a bias against the girl child which is reflected in a variety of social customs and practices. Recently, with the spread of urbanization and better social awareness, a change in outlook is in the offing. The present article identifies five specific correlates which are directly related to the proper care of the girl child. However, the author seems to be certain that apart from laws and legislations to safeguard the interests of the girl child, it is ultimately the home followed by the larger society which have to take up the challenge and usher in a new era in favour of the girl child.

INDIA IS a vast country with considerable regional diversity. Underlying these differences is a thread of unity that is evident in the value systems, which are the reflections of our social philosophy and religious thoughts. The cultural ideology influences the concept of the female gender and the various role models presented and advocated for women. An Indian woman's identity is deeply embedded in the entire family, caste and the wider community. The role that women play in society and

the images developed are not only from the exigencies of biology and social networks but are deeply rooted in the myths, legends and the religion of the culture (Ghandicilly, 1988).

The neglect of female children is indicated by infant mortality rates, nutritional surveys and hospital registers which show that medical attention is sought much later for girls. There has been a steady decline in the sex ratio which was 972 females per 1000 males in 1901, 955

This paper was presented by the author at the World Conference of Curriculum Instructions.

females per 1000 males in 1912, 935 females per 1000 males in 1981 and 929 females per 1000 males in 1991 (Census of India)

Negative attitudes towards the girl child are rooted in a complex set of social, cultural and historical factors. Studies indicate the extensive dietary specification for a lactating mother with a son. Even health care statistics are indicators of the strong male bias

It is also seen that a girl is inducted into house managing and child care roles at a very early age. This induction of girls depends largely on the composition and economic status of the family. A study on 'Weavers of Varanasi' revealed that most of the girls, by the time they are six years, are adept at sweeping, cleaning and washing dishes and looking after their siblings (Annadalakshmy & Bajaj, 1973). Similar findings have been obtained by studies done on other poor communities. Early induction into household chores and child care is responsible for the low level of literacy in girls and the fact that their drop out rate from the primary and middle school is at least 10 per cent higher than it is for boy (Census of India 1991)

A society undergoing transition, such as the contemporary Indian society, experiences a great deal of confusion in social and moral norms. These tend to create conflict in human relationships (Augustive, 1982). The multiple phases of urbanization, industrialization and social legislation have affected various aspects of traditional Indian society and family organization. There has been a change in the formal patterning of rights and duties and also, in the defined status of age, sex and kinship. This has brought about some obvious changes in the stereotyped concept of masculinity and femininity. One of the

major consequences of this process of change has been the emancipation of women from their tradition-bound ethos. Urbanization has had a positive effect on the general status of women as is evident from the indicators of health, education and quality of life. The processes of urbanization and industrialization have brought about a socio-psychological change in the attitudes and values of the people, especially among the urban population, as indicated by various contemporary studies. Some of these correlates that are directly related to girl child care are

1. Education of the parents (especially the mother)
2. Maternal employment
3. Nuclear vs. Joint families
4. Urban vs. Rural settings
5. Child rearing practices

Education of the Parents (Especially the Mother)

"To awake the people, it is the woman who must be awakened. Once she is on the move, the family moves, the village moves, the Nation moves" (Nehru)

Studies indicate that graduates and post-graduates have higher aspiration levels for their daughters and are in a better position to argue out the case for a better life for their daughters. As all child-development experts would agree, the initial years are the crucial foundation years in a child's life. An educated mother is in a far better position to support the equality of her daughter to her son and also to ensure its implementation. She is in a better position to emphasize the worth of a girl child more than an uneducated mother, because she is a practical example herself. This was also recognized by our national leaders as a powerful agent in the

development and empowerment of woman. That is why, women's education has been given importance in the Five Year Plans. Starting with Durgabai Deshmukh who emphasized the special provision required for women's education, in the first Five Year Plan, to the present plans, women's education has been emphasized. One may highlight here the higher rate of increase in literacy among women as compared to that of men. However, women's literacy is still below the 50 per cent mark (39.42 per cent according to the 1995 Census)

The obstacles that hinder the girl child's education are

1. Attitudes of parents towards education
2. Reluctance of parents towards girls' education
3. Parents' illiteracy coupled with narrow-mindedness
4. Poverty of parents

From the above stated points it is obvious that the first three have a direct link with the education of parents. And some of the points discussed below would indicate the stronger relation between the mother's literacy and the position of the girl child. A strong negative correlation has been established between female literacy and fertility and infant mortality rates. According to recent studies it has been indicated that while the fertility rate for an illiterate woman is 5.1, for a literate but below middle school woman it is 4.5, middle school but below matric it is 4.0, matric but below graduate it is 3.1 and for a graduate it is 2.1.

According to the 1991 Census, one-third of the population in the age group of six years is concentrated in 125 districts which have only 3.5 per cent of the female literacy in the country. The above stated statistics indicates the relation between

female education and the number of children in a family. But we hardly need any statistics to show that if the number of children is less, the nutritional status and educational input would be more. The number of siblings to be taken care of by the elder girl child decreases. Thus the girl child has a higher chance of being enrolled in a school, as the mother can manage without her assistance at home and, of course, being educated herself, she understands the importance of education for her daughter. An educated mother will go to a greater degree of inconvenience, in order to see her daughter getting educated.

Education sharpens the reasoning abilities of a person. The higher the education level of parents the more is the stress laid on reasoning out matters with the child. As all psychologists would agree, this would enhance the proper development of the 'ego' and a rational 'super-ego'. The long-term impact would be that the girl child will be able to organize her life with a more rational approach. It is important to improve the position of the girl child and subsequently of women because

1. They contribute to the socio-economic development of society, by increased participation in national development and national economic activities.
2. Children receive their education and values, primarily from their mothers during the most crucial years of development.

With the growth of education among women, the concepts of wife and mother have changed, but those of husband and father remain unchanged to a large extent. This does create a lot of conflicts in the family which assume many

different variations, shapes and shades. There is no longer an absolute "either-or" (Vohra & Sen, 1992). One of the reasons why the sex stereotypes in boys is different in comparison to girls is stated later in this paper.

Maternal Employment

There is a preoccupation with marriage through a number of customs and observances (Chetan Kalbagh, 1991). Motherhood is seen as the highest achievement of woman's life and marriage is the gateway. While paving a path towards independence in women, employment and education give other outlets for getting a sense of achievement. Education of women has initiated changes in the traditional patterns of conjugal role performance and decision making. While education of wives initiated the process of change in decision-making at home, employment furthered it by altering the male dominance in decision-making. If the mother has a sense of fulfillment and finds herself capable of managing her own life, then automatically the message is imparted to the children. Both consciously and unconsciously, the children realized that womanhood is not necessarily subordinate to manhood.

Some highlights of the studies done on the perceptions of roles of children of working and non-working mothers (for lack of a better alternative 'working' here means working on jobs which provide the mother economic advantages) are given below

1. Both boys and girls of working as well as non-working mothers felt that a mother's primary duty is as mother to her children
2. Girls were more aware of the

importance of education as a necessary prerequisite for economic independence for women

3. Girls' thinking was more progressive than that of the boys in terms of employment for women.
4. Majority of the boys felt that mothers should not work.
5. Stereotypes regarding female employment and preferred type of occupation for women were evident in the responses of the boys.

The last two points highlight an important issue about the perception of sex stereotypes in boys, in comparison to girls. The biggest motivation to work for Indian women is the sheer economic necessity. This reason is especially applicable to lower and lower middle class families. In the case of the upper middle class, especially among educated women, the reason why they take up jobs is varied and often is more of a psychological nature. The result of woman's employment is that she also becomes a '*bread earner*' of the family even if a '*minor bread earner*' and secondarily, it increases her confidence and overall personality development. The end product is that her daughters are exposed to a role model who may often be overworked, but who is an individual in her own rights. Or, at least, shows concrete indication of possibilities of being an individual in her own rights.

A working woman's position in the social hierarchy is higher than the 'non-working woman's'. The monetary advantages are all too obvious to the children. Maternal employment improves the economic conditions. This has shown to have a direct correlation to the educational levels of the daughters. This, in turn, is an indicator of a better life for

the girl child. It enables the girl child to develop a better self-esteem of herself and her possible capabilities

Maternal employment and education, no doubt, increase awareness in women. This is a step toward emancipation of women and thus the emancipation of the girl child. But no amount of modernization, urbanization, industrialization or any 'authorization' would help if man and woman, and especially woman, do not make a conscious effort to free themselves from discrimination, subjugation and oppression. It is a conscious and aware mother who teaches her daughter that duties one must perform but the basic human rights are her birthright.

Nuclear Families vs. Joint Families

In all societies, the family is the primary social matrix within which the personality is rooted and nourished. Parents being primary socializing agents, convey their values and expectations to their children during the early years of their development which, in turn, would be reflected in the child's behaviour.

A study conducted by Ames (1974) investigated the influence of the types of family on 3½ to 5-year-old children and their interaction with adult family members. The findings indicate that in nuclear families fathers participated in taking care of the children and consequently had more direct contact with them from an early age. While in joint families, a variety of people, especially the grandmother, did some casual care-taking. The notion of patriarchy is very strong in most parts of our country. It undoubtedly has a number of positive points, but it is this mode of family system that reinforces myths about the weakness and the second

class status of woman. To cite an important example, at the time of the Indian National Movement, the political and economic emancipation of women was never discouraged and, in fact, it was pursued as an important objective. But efforts at emancipation in the family sphere were met with bitter opposition (Hindu Code Bill).

Contemporary studies on urbanization, modernization and industrialization, indicate that along with the decision-making authority of females in the nuclear family, it helps in improving the position of the females in the family. The fathers present an ever-increasing positive role model to their daughters within a nuclear/extended family. This is as important for the development of a wholesome personality of the girl child as is the role model of a confident mother who is an individual in her own rights. (In this paper, the 'extended family' means the family in which the mode of residence is predominantly nuclear, but the relatives of one or both sides are in constant touch and have a certain amount of influencing power.)

To a woman, success in her personal relations and family are as important as her career. Many young couples solve this problem by the husband becoming more involved in the child-caring and domestic duties. Many a time, this starts as a 'non-alternative solution' situation, especially in the nuclear family. Gradually, the father may realize the pleasure of child-rearing. But the fact still remains that the pattern of male superiority is still strong and a redefinition of roles is still only possible in a nuclear setting. This provides a more balanced role model for the children. With more 'power' being invested in women in

the nuclear extended family, the girl child stands to benefit. In summation of this discussion the statement made at the Trivandrum Women's Studies Conference on Gender Justice is 'apt. "We need to redefine the roles of man and woman within the family. We need to re-emphasize the role of the father in addition to the role of the man "

Urban vs. Rural Setting

A significant feature of the structure of kinship interaction in the urban setting is its multi-lateral orientation. Under the patriarchal joint household system it is almost inconceivable that one's sister's husband, wife's sister/brother or wife's parents, not to speak of more distant affinal kin, stay with or interact intimately with one's household. In fact the kin of the wife often find it easier to adjust in the urban neolocal household as compared to the husband's kin. The reason attributed to this is that the major responsibility of running the urban household lies with the wife. Thus with certain responsibilities also come certain privileges. In the urban neolocal household it is often seen that members of the two sides of the family stay with the family at different stretches of time or, although not that common, stay at the same stretch of time within the neolocal family.

The subtle but important message received by the girl child is that women have a crucial role in the running of the household and that, in theory, the system is patrilineal but for all practical purposes, the woman does not get alienated from her kinship ties. The structure of authority is diffused between the male and female members of the urban household, whereas in the rural setting, because of the

extensive and rigid hierarchical system, the authority line still flows through the male lineage.

In urban India, the nuclearization of family is on the increase but this is different from many others, observed by sociologists in other societies. Here, ties with the extended kinship are maintained to a much larger extent. Such a family is to the advantage of the girl child. It also encourages more male and female interaction within the family, again to the advantage of the girl child. At the same time, the larger kinship groups are present at the time of any crisis or celebration. Comparing the kinship interaction between the rural and the urban joint family, there is more realization of patriarchal rules in the urban setting.

In the Indian situation, the family acts as the social security agency as well, because of the near absence of state welfare agencies. In such a situation, it is difficult to think of an almost complete society consisting of nuclear households. It is not uncommon for the well-to-do to live separately from their aged parents within the same city or town after marriage. On the other hand, those who cannot afford to live separately due to economic conditions do live together in spite of the tension between members of the two or more nuclear families. The patriarchal rules tend to be more strict in the second case. This encourages the subordinate position of the girl child.

Child - Rearing Practices

The studies by Margert Mead, "Growing up in New Guinea" and Leigh Muntorn and John T. Hitcher on, "The Rajput of Khalapur" and "The Six Cultures", study

by Yale and Cornell Universities have established a link between childhood experiences and adult behaviour. In these studies the household variables are identified as the predictor variables and are also found to be strongly associated with child-rearing practices. Some of the household variable studies in the above social studies which have an impact on child-rearing practices are household type, age, status, number of younger and older siblings, their birth order and mother's contribution to family finances.

Education brings about a change in the way the mother brings up her children. Family interaction studies show that educated parents tend to reason out things with their children and they tend to be less dominating. The child is allowed to voice his opinion, though it may not necessarily be accepted by the parents. A democratic approach to discipline helps in the development of a personality which is based on reasoning and rationality. This more or less democratic approach to discipline, helps the girl child to understand herself as well as the world around her in a better manner. It helps her to set goals for herself which are both

realistic and wholesome

The psychological laboratory within which human nature is formed and is the source of our most intimate and most testing impressions is THE HOME. "The power of the home cannot be disputed since the house has the child before any other social agency can get to him." (Keplen, 1959). It is only the parents, especially the mother, who can inculcate the idea in her daughter that she is not merely a woman. It is she who can teach her daughters and sons that a girl is as essential to the society as her brother. It is in the early years that the girl child can be taught that she holds 'half' the world and that she is an asset and not a burden. (Kulshreshtha, 1991).

If one would go back to the correlates that have been focused on in this paper, it would be clear that the home has a large role to play in them, as it is an important and primary building block of society. There are laws and legislations to safeguard the girl child and there will be many more to follow. But it is important to remember that it is the 'social laws' and social awareness which really bring about changes in society.

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Advancing Secondary Education of Girls : The Haryana Attempt

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Haryana, with many firsts to its credit, is making a big leap to provide secondary education to all by 2005. The State has several innovative programmes to its credit. The target seems to be achievable in terms of the tremendous push in demand for secondary education being generated by vigorous implementation of programmes like EFA and DPEP, new socio-economic reforms, rising per capita income and increasing return to female education. The age-old cultural, socio-economic, educational barriers on education of girls are sharply disappearing. There is a need for the State to develop "new management ethos" and "work culture" in administration, planning, monitoring and evaluation procedures with uncompromising focus on quality and to take bold decisions regarding standardization of basic education facilities, classroom infrastructure, etc. These should be at least comparable to or preferably better than those being provided by high fee charging public schools of repute. This would require massive budgetary support for meeting the new demands, aspirations and quality aspects of contextual education. Any complacency in this respect would be detrimental to the process of advancement of secondary education of girls in the State.

Parameters of Push

Haryana, with many firsts to its credit, a State with a unique distinction of having all villages connected by road and electricity, covered with basic facilities like drinking water and schools, is emerging as a State with an enviable track record of phenomenal growth in income and

educational facilities. The State being on the threshold of achieving universal primary education is rightly networking for achieving universal secondary education in a period of 10 years or so. In this context there are four basic parameters which have far reaching implications for generating demands for

secondary education in the State. These are as follows

EFA and DPEP

Education for All (EFA) and the DPEP (District Primary Education Programme) strategy are likely to ensure universal enrolment and universal retention with increased level of achievement at the primary stage. Along with this, the general awareness about the benefits of education, particularly of girls, are bound to generate high demand for secondary education.

Compulsions of Rising Per Capita Income

Haryana is the second richest State in the country having per capita income almost twice the national average. It is a well established fact, supported by a number of studies, that income level and the demand for secondary education are positively related. Further, the income elasticity of demand for secondary education, especially for girls and among weaker sections, is rather high. The State will, therefore, find it much easier than the other States in India to realize the stipulated targets of universalization of secondary education. In this context the observations of Kelly (1993) are relevant "Sex inequality in education is not a problem. That will go away once a nation has increased its gross national product and built an industrial infrastructure". The increased income will thus have positive impact in reducing gender inequality in education in the State. Further, incidence of poverty and level of education are negatively related. The increasing per capita income would result in the rise in demand for secondary level of education.

Pressure of New Economic Policies

The new economic policies and reforms, globalization and liberalization would create high demand for skilled labour forces which can only be provided by promoting secondary education. Psacharopoulos and Veliz (1993) in their studies have found strong positive correlation between training and eight years of formal education. Globalization, to be effective, has to be accompanied with effective localization and contextual development in which secondary education programmes play a crucial role for preparing the labour force for acquisition of the much needed new skills and training.

Investment Criteria and Return to Education

The female earning profiles, particularly for secondary education, are much higher than the males. In fact, Psacharopoulos (1993), while analyzing the rate of return on education for different countries finds that in developing countries, return to education for males at primary level are abnormally higher than those for females. This trend gets reversed at the secondary stage as can be seen from the table given below.

TABLE 1
Return to Education by Gender by the Mincerian Method

Education Level	Global Average		India	
	Men	Women	Men	Women
Primary	20.1	12.8	27.5	18.7
Secondary	13.9	18.4	15.6	16.2
Higher	13.4	12.7	6.4	8.4
Overall	11.1	12.4	-	-

Source : Psacharopoulos (1993) Tilak (1989)

Tilak (1987) observes that the rate of return for females for secondary and higher level education was much higher than that for males. Nautiyal (1990) finds that average returns to female education over literates, particularly amongst the socially disadvantaged groups, were four times higher than those of the males.

The Crumbling Barriers

The problem of non-enrolment of girls, particularly on account of socio-cultural factors, home environment, distortions in labour market and school factors have long been considered as potential barriers in universalization of secondary education. There are scores of studies to demonstrate that these barriers can be effectively overcome by appropriate interventions. Let us look at these barriers in some detail

Cultural Barriers

An empirical study conducted by King et al. (1986) finds that in Asia cultural norms do create "restrictive environment" for female education. Cultural conservatism is often reflected in the customs of (i) early marriage, (ii) dowry, (iii) concern for young girls' physical and moral welfare, (iv) attitudes towards sex, segregation, etc. which adversely affect girls' schooling, particularly at the secondary and the post-secondary stage. Further, education is often perceived as corrupting the conventional attitudes towards (i) physical labour, (ii) household work, (iii) breeding defiance of elders and parents, (iv) making one highly self-centred and even immoral. The typical mother's attitude of imparting only family life and/or religious education to girls has been dominant, particularly among the poor and the underprivileged groups.

Nevertheless, recent researches have clearly established that the force of cultural practices can be altered by effective interventions, like improving the economic conditions of the target groups, launching suitable awareness generation programmes and mobilization campaigns using multi-media and new information technology to change "people's mind", and the parental gender attitude towards girls' education.

Further, it has been found that cultural practices do not prevail uniformly across all sections of the society. Rosenzweig (1980) finds that being Muslim was not a significant barrier to female enrolment in India. Hence, the strategies for tackling the cultural barriers have to be highly local specific

Labour Market Barriers

In developing countries, significant gender discrimination exists in the labour market which is reflected in (i) wage structure, (ii) employment and unemployment rates, (iii) participation in labour forces, and (iv) return on education.

There are a number of studies, particularly those conducted by the National Sample Survey Organization, which reveal that females' wages for the same work are nearly half of the males. Tilak (1987) finds that mean female earnings were three times lower than those of males for the same level of productivity. A study undertaken by Raj (1982) quoted in Tilak (1991), revealed that equal and even better qualified women were usually in lower posts as compared to men. This kind of discrimination certainly has a regressive impact on parents' willingness for female education.

Similarly, the incidence of

unemployment among educated females is usually much higher than among the males. The existing states of unemployment among them as well as the attitude that women's productive role is only "secondary" and "supportive", that their earnings are supplementary to the total family income or 'pin' money, adversely affect the educational choices for girls particularly for secondary and post-secondary education. It is also argued that women, on account of their reproductive and child rearing roles, spend less time in the labour force than men. Therefore, there is less incentive to invest on their education.

In a State like Haryana, according to the Census of India—1991, the work force participation rate for female main workers was as low as 6.5 per cent as against 47.1 per cent for males. There appears to be male monopoly in the labour market.

Nevertheless, there are several legal and constitutional provisions which forbid discrimination in employment, wage, etc. on grounds of sex. There is an Equal Remuneration Act which forbids discrimination wages for the same kind of work on the basis of gender, etc. These provisions, if implemented effectively, will go a long way in counteracting the barriers posed by the existing discriminatory wage structure and gender based employment preferences. There are scores of studies which clearly establish that the female workforce participation rate is a rather 'U' shaped one. It increases sharply after middle level of education. In fact, middle level of education constitutes the threshold point beyond which female education is necessary to increase their participation in the workforce (Nautiyal, 1985).

Return on education to females, particularly amongst the socially

disadvantaged and deprived groups are generally much higher than the males. A global study undertaken by Psacharopoulos (1993) reveals that return to female secondary level education are much higher than those of males. Hence, on purely economic criteria, the case for the preferential investment on female education is unquestionable.

School Factors

Five basic elements significantly influencing female education at the secondary level include (i) accessibility of school, (ii) quality of school, i.e., quality of facilities available in schools, (iii) type of schools, (iv) incentives like scholarship, free textbooks, stationery, (v) availability of female teachers, and (vi) relevance of curriculum.

Non-availability of schools and distance of schools are among the greatest barriers to girls' education. Countries like Indonesia, Malaysia and Philippines have been able to boost girls' enrolment by tackling the problems of physical accessibility. The quality of school and the availability of basic facilities like separate lavatory for girls, separate common room, female teachers, etc. significantly influence the parents' decision regarding schooling of their daughters. Lack of awareness about various facilities like availability of free textbooks, freeships, scholarships also adversely affect girls' enrolment. The demand for girls' education can be considerably influenced by making curriculum contextual and conducive to gender equality promoting empowerment of girls.

The State of Haryana, in recent years, has embarked upon a number of schemes and programmes which are likely to have

a far-reaching impact on physical accessibility of school, incentives and the relevance of curriculum to the current and emerging need of the masses. The schemes like *Apni Beti Apna Dhan* providing grant of Rs.3000, *Kanya Dhan* (Rs 500 to be paid to the mother within 15 days of the birth of the girl child and Rs 2500 to be deposited in the name of the girl child in a bank which will become Rs. 25,000 after 18 years and would be payable to the girl when she attains the age of 18 years), would certainly influence the attitude of parents towards the girl as a liability. This scheme is limited to the first two female births in the family.

Free education of girls for 16 years, i.e. upto graduation level, including professional courses is another bold step towards promoting and facilitating the education of girls

The State also has a number of schemes for rural development including specific annual allocation of Rs.400 crores for rural development declared by the Chief Minister. This will go a long way in augmenting new income in rural areas and generating demand for secondary education of girls. Briefly, the following are some of the major incentive schemes for promoting education of girls in the State.

(i) *Primary Education*

- (a) Free uniforms to girls from SC and economically weaker sections
- (b) Free stationery to girls
- (c) Attendance prize to SC girls
- (d) Attendance prize to nomadic tribe children
- (e) Free textbooks to girls from SC and weaker sections
- (f) Stipend to denotified tribe children
- (g) Stipend to the children of those who are engaged in unclean occupations

(ii) *Secondary Education*

- (a) Free uniforms for girls from SC and economically backward class.
- (b) Free stationery to girls from SC and economically backward classes.
- (c) Free books for SC boys and girls in Classes VI to VIII at the rate of Rs.40 per year and in Classes IX to X at the rate of Rs 60 per year.
- (d) Rs.15 per month as opportunity costs to SC students reading in Classes VI to VIII.
- (e) Scholarships to Vimukt and Tapriwas children in Classes VI to VIII at the rate of Rs.15 per month and in Classes IX to XII at the rate of Rs.10 per month.
- (f) Scholarship to SC girls passing middle examination at the rate of 10 students per district
Rs. 80 per month in Class IX
Rs. 100 per month in Class X
Rs. 120 per month in Class XI
Rs. 140 per month in Class XII
- (g) Stipend to SC girls in Classes IX to XI at the rate of Rs.20 per month.
- (h) Free education for all girls in private schools.

(iii) *Higher Education*

- (a) Sixteen years of free education to girls upto graduate level in professional courses like BE, MBBS, BDS, etc
- (b) State Government Merit Scholarship Scheme in colleges for general education.
- (c) Haryana State Silver Jubilee Scholarships.

Prospects

Nearly two-thirds of the school-age

population (6-17 years) is already in schools as is evident from Table 2. To push this enrolment to 100 per cent, the State is required to concentrate more on improving the quality of facilities, the inputs and content and process of education particularly for the development of contextual curriculum, making learning more meaningful, joyful and relating it to real life needs

resources than the private bodies, can ill afford to be content with poor quality of schools as compared to privately run public schools.

There is need for the State to develop "new management ethos" and "work culture" in administration, planning, monitoring and evaluation of programmes with uncompromising focus on quality. There is need to take bold decisions

TABLE 2
Enrolment in Schools (1993)

Stage	Enrolment in 000			Enrolment Ratio		
	Male	Female	Total	Male	Female	Total
Primary	979	815	1794	92.6	81.1	87.0
Middle	464	298	762	73.2	51.8	63.0
Secondary	230	129	359	54.2	35.2	45.8
Senior Secondary	154	066	220	44.6	24.0	35.5

Source Government of Haryana, (1995) Department of Education

Towards Total Quality Management

It is pertinent to note that people are increasingly becoming highly quality conscious. It is the quality of education and the facilities provided by the State at the elementary stage of education which will determine the demand for education at the elementary level itself as well as at the secondary and post secondary stages. Therefore, every caution must be exercised to check the current tide among masses in respect of increasing mistrust on the quality of services provided by the State Government and the unbridled craze for admitting children in high fee charging public schools which are beyond the reach of the masses. The State, certainly empowered with much higher access to

regarding standardization of basic education facilities, classroom infrastructures at all the stage of education which should be comparable to and preferably better than those being provided by high fee charging public schools of repute. The State must take multi-prolonged action programme to recoup the credibility

Thrust Areas

Some other suggestions or thrust areas which call for prompt action towards the realization of the much cherished goal of universalization of secondary education may include the following.

- (i) Upgrading of existing viable primary schools to middle schools

- (ii) Upgrading of middle schools to secondary or higher secondary schools
- (iii) Increasing existing strength of secondary or senior secondary schools by opening new sections and raising their number at least by three times their present number.
- (iv) Launching a vigorous drive for recruiting female teachers
- (v) Strengthening the basic physical facilities like separate urinals, lavatories and common room for girls and female teachers
- (vi) Organizing curriculum renewal exercises in close cooperation with all developmental agencies, social activists and institutions of higher learning, for removal of gender bias and empowerment of girls.
- (vii) Strengthening the mechanism of in-service training and short-term orientation of teachers in such a way that teachers are exposed to new innovations, trends and approaches in teaching and learning at least once every year.
- (viii) Strengthening the mechanism of inspection and visits to schools and ensuring that the authorities do carry out inspections every month as a routine with some element of surprise

Financial Implications

The above programme would call for increasing the present level of per pupil State expenditure by three to four times. Strangely, Haryana is one of the States which has the lowest per capita public expenditure on education, i.e. Rs 255 as against Rs.458 in Himachal Pradesh. Haryana spends barely 2.9 per cent of GDP on education as against 8.4 per cent in Himachal Pradesh. Hardly any kind of quality education can be provided with such paltry allocation of funds of which nearly 98 per cent is usually accounted for by teachers' salaries alone. It may be noted that in the advanced countries the per pupil expenditure at the primary stage is almost at par with the per pupil public expenditure at the university stage as can be seen from Table 3

TABLE 3
Per Pupil Expenditure of Selected Countries on Education

Country	Year	Per Pupil Public Expenditure (Rs.)		
		Primary	Secondary	Higher
India	1991	713	961	27,993
Singapore	1984	17,763	26,102	55,180
Japan	1984	44,795	45,043	59,520
Korea	1984	9,300	7,006	9,920

Source : Nautiyal, K C. 1994. 'Disparities in Public Expenditure on Primary Education, and their Impact on Eternal Elusive Triangle of Quantity, Quality and Equality', a paper presented at the National Seminar on Financing of Primary Education for All, NIEPA, New Delhi.

In India, the disparity in per pupil public expenditure on primary education vis-a-vis higher education is highly glaring. The per pupil public expenditure on primary education is 1/40th of what is provided for higher education.

It is primarily because of the paucity of allocations to basic education that the quality of education at the elementary level is dismal and consequently the base for subsequent secondary and tertiary level education continue to be weak.

By 2000 the population of Haryana is likely to be around 20 million of which nearly 4.5 million will be in the age group of 16 to 17 years. There is thus a need to

create additional facilities for absorbing additional enrolment of 1.5 million in the next five to six years. The population of the State by 2005 is likely to be around 25 million. The corresponding population in the age group 6 to 17 years would then be around six million. Thus, for achieving universalization of secondary education by 2005 there is a need for strengthening the existing educational structure adequately so that it can provide education to additional three million students. The total education budget has to be worked out keeping in view the new demands and quality aspects of contextual education in a phased manner.

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Educational Development of SC/ST Girls : Review of Planning and Management Strategies

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Since Independence, the education of SC/ST groups has drawn the attention of policy makers and planners. Over the years, a number of incentives and facilities have been provided to motivate these groups to avail of the various educational facilities. But group inequalities continue to persist among different sub-groups of SCs and STs. This is partly due to inappropriate planning and management strategies. The author analyzes the educational status of SC/ST girls in Rajasthan. This is followed by a review of planning and management strategies adopted to promote the educational development of these groups. The paper also analyzes policies and programmes and suggests strategies to promote the educational development of SC/ST girls.

EVER SINCE Independence, the education of SC (Scheduled Castes) and ST (Scheduled Tribes) has drawn the attention of policy makers and planners. Recognizing their extreme poverty, exploitation and very poor representation in the educational institutions, the State has been directed in the Constitution itself to promote with special care the educational and economic interests of weaker sections of the society in general and of SCs and STs in particular (Article

46 of the Directive Principles of State Policy). Special allocations have been made in the various Five Year Plans of the country to promote the social, economic and educational development of the scheduled groups. In education, a number of incentives and facilities have been provided to motivate these groups to avail of the various educational facilities. As a result, considerable progress has been made in their educational development not only in comparison with their earlier

position but also in relation to the non-scheduled population. The gap, however, continues to be wide. Further within-group inequalities continue to persist among different sub-groups of SCs and STs, e.g. there are male-female differentials, rural-urban differentials and inter-caste and inter-tribe differentials in the educational status of these groups. This is partly due to the planning and management strategies followed so far.

In this paper, an attempt is made to briefly present the educational status of SC/ST girls in Rajasthan. This is followed by a review of planning and management strategies adopted so far to promote the educational development of these groups.

Educational Status of SC/ST Girls

At the outset it is important to note that SC/ST girls suffer from cumulative disadvantage i.e. belonging to the deprived communities as also being females in a social set-up where sex inequalities are prevalent. Rajasthan ranks the second lowest in overall literacy and in female literacy in the country.

The overall literacy rate (38.55 per cent) for Rajasthan is slightly lower than the national average (52.21 per cent) for women. The literacy rate in the State among SC females is 2.60 per cent and among ST females it is 1.20 per cent, whereas the literacy rate of SC and ST women in India is 10.93 and 8.04 respectively.

There are 59 specified Scheduled Castes and 12 Scheduled Tribes in Rajasthan. The number of primary and upper primary schools are as follows

<i>Schools</i>	<i>Area</i>		<i>Total</i>
	<i>Rural</i>	<i>Urban</i>	
Primary Schools	25,064	3039	28,103
Upper Primary Schools	6645	1689	8334

Primary schools are mainly managed by local bodies (24,795 out of 28,103). Upper primary schools are mainly government schools (7372 out of 8334). In the State, habitations with a population of 300 or more, predominantly populated by SC/ST, are 1262. Out of these, 77.26 per cent are served within the habitations and 84.63 per cent are served up to 1 km by upper primary schools. In Classes 1 to V the percentage of SC/ST in total enrolment in the State is 16.74 and in Classes VI to VII it is 13.39. In rural areas, 25 per cent girls and in urban areas about 38 per cent girls are enrolled. Among SC students at this level the percentage of girls is the lowest (12.21 per cent) in Bikaner (rural) and the highest (42 per cent) in Ajmer (urban). The percentage of ST girls to the total number of students at the primary level is the lowest (6.25 per cent) in Bikaner (rural) and the highest in Banswara (43.68 per cent).

Girls form 12.16 per cent of the total enrolment in Classes VI-VIII, 34.49 per cent in urban areas and only 19.75 per cent in rural areas. The corresponding figures for ST girls is 7.04 and 20.89 per cent. The percentage of girls among SC ranges from 1.33 per cent in Jodhpur (rural) to 25.26 per cent in Ajmer (urban) and among ST from 1.38 per cent in Jalore (rural) to 40.64 per cent in Banswara (urban).

For the State as a whole, girls formed

8.18 per cent of the total number of students in rural areas and 25.09 per cent in urban areas in Classes IX and X. The corresponding figures for SC girls range from 0.86 per cent in Nagpur (rural) to 29.64 per cent in Bikaner (urban) at the senior secondary stage. In Classes XI and XII, girls form 8.24 per cent of the total in rural areas and 19.37 per cent in urban areas. Sawai Madhopur (rural) has the lowest percentage (0.90) of SC girls and Bikaner (urban) has the highest proportion of 34.62 per cent. The corresponding figures for ST girls is 1.21 per cent in Bundi (rural) and 23.08 in Bikaner (urban).

Girls are concentrated in arts courses at the secondary level. In the year 1986-87 girls formed 30 per cent of the total number of students offering arts courses, 6.87 commerce and about 12 per cent science courses.

Planning Interventions : A Review

During the last four decades educational planning has largely focussed on the expansion of educational infrastructure to cover all population groups. Thus, increasing allocations have been made for opening of schools, construction of school buildings, provision of furniture and equipment, training and recruitment of teachers, expansion of supervisory infrastructure. In the case of scheduled groups, planning has meant financial allocations for opening of schools in SC/ST habitations in relaxation of various norms, provision of teachers for schools in tribal areas in relaxation of prescribed qualifications and opening of Ashram schools and Ashram *shalas* and also construction of hostels at the district headquarters.

Allocations have also been made for stipends and scholarships at various levels, provision of ancillary services like books, equipment, uniforms and midday meals at the school stage and book banks at the higher educational levels. There is also reservation of seats and relaxation in marks and age, at the higher educational levels.

In the National Policy on Education (NPE) 1986, and subsequently in the Programme of Action (POA) special attention has been given to promote educational development of SC and ST in general. The following strategies have been suggested therein

1. Incentives to indigent families to send their children to school regularly till they reach the age of 11.
2. Pre-matric scholarship schemes to children of families engaged in occupations like scavenging, flaying and tanning
3. Constant micro-planning and verification to ensure enrolment, retention and successful completion of courses by SC/ST students
4. Recruitment of teachers from SC/ST
5. Provision of hostel facilities for SC/ST at the district headquarters.
6. Location of school buildings, balwadis and adult education centres in Scheduled Caste *bastis*, *mohallas* and Tribal villages.
7. Allocation of National Rural Employment Programme (NREP) and Rural Labour Employment Guarantee Programme (RLEGP) resources to provide educational facilities for SC/ST
8. Content and value orientation of curricula in respect of STs

The Programme of Action also

suggests evolving of detailed guidelines for monitoring to ensure qualitative implementation of programmes, a single nodal agency to coordinate programmes leading to the development of SC/ST and an inbuilt mechanism for continuous evaluation of programmes

It may be noted that planning strategies largely continue to be input-oriented with very little focus on the utilization aspects. Even in the inputs there are problems because of scarcity of resources on the one hand, and poor administration of schemes, on the other. Not only is the amount of scholarship inadequate, the coverage is also partial. Several studies have highlighted the indifferent administration of the schemes. According to these studies there is lack of awareness, poor utilization of inputs and incentives are not available in time. These defeat the very purpose of the schemes.

At the primary level, the incentives are minimal. In certain cases they do not cover even the actual cost of education, not to speak of subsidizing the high opportunity cost. The coverage is also not of all the children of school going age groups. The enrolment, therefore, starts dwindling from the primary stage itself.

Meaningful incentives are basically made available at the higher education level. Here the coverage is also complete.

From the view point of females, it may be noted that the special schemes for SC/ST continue to be gender neutral. It is feared that, as in the past, these incentives and facilities will be mostly utilized by SC/ST boys.

Special Provisions for SC/ST Girls' Education

The following provisions are available for

SC/ST girls' education

1. Free education upto university level
2. Attendance, scholarships and uniform
3. Special quotas in admission to teacher training and medical courses
4. Appointment of untrained matriculate women on a consolidated salary of Rs. 400 per month
5. No age bar on widows and divorcees to enter government services
6. Provision of a second teacher (female) in all single teacher schools
7. Stipend for widows and divorcees in STC and B.Ed. colleges
8. Separate schools for girls
9. Non-formal education
10. Shiksha Karmi Yojna
11. Free hostel facilities
12. Ashram schools
13. Appointment of school mother.

Policies and Programmes

Rajasthan has set the goal of achieving universalization of education by the end of 1995 in line with the National Policy on Education, 1986 and the Constitutional Directives of free, compulsory and universal education for all children from the age of six to 14 years. This can be done only when over 2.5 million girls still outside are brought into the system through formal and non-formal education.

For achieving the goal of universalization of education by 1995, Rajasthan was provided educational facilities for an additional 2.5 million girls and boys during the Eighth Five Year Plan period.

The National Policy on Education envisages that education would be used as a strategy for achieving a basic change in the status of women. The national education system would :

- 1 Contribute towards development of new values through redesigned curricula and textbook
- 2 Play a positive interventionist role in the empowerment of women
3. Promote women's studies as part of various courses. The main feature of the targets and implementation strategy will consist of the following
 - (i) to gear the entire education system to plan a positive interventionist role in the empowerment of women;
 - (ii) to promote women's studies as a part of various courses and encourage educational institutions to take up active programmes to further women's development,
 - (in) to widen the access of women in programmes of vocational, technical and professional education,
 - (iv) to create dynamic managerial structure to cope with the targets envisaged
4. Preference in requirement of teachers upto school level should be for women.
- 5 The common core curriculum is a powerful instrument for the empowerment of women through the incorporation of values commensurate with the new status of women
- 6 Women's dimension should be incorporated into courses in different disciplines.
- 7 Research should be encouraged in identified areas and subjects which are crucial in advancing knowledge in these areas
8. Teachers and researches should be oriented to handle women related topics and to incorporate women's dimension into general topics

Suggested Strategies

The programmes for SC/ST women's education will have to be implemented on priority so that the women attain a comparable level of education. The strategy should be adopted for raising literacy levels and education programmes among SC/ST women have to keep in view the vast culture, geographical and ecological variation as also the problems relating to poverty and ignorance

To promote the educational development of SC/ST girls vis-a-vis SC/ST boys it would be necessary to give more attractive incentives to girls. There is need to look at the resource allocation for education to girls. For some time substantial resources would need to be allocated for schemes boosting girls' participation.

Mere provision of incentives and separate allocation of resources for girls in themselves, would not be adequate in increasing the participation and achievement levels of girls. Efforts would

The following measures should be taken for the achievement of the above parameters (based on POA 1986)

- 1 Every educational institution should take up active programmes of women's development
- 2 All teachers and non-formal education/adult education instructors should be trained as agents of women's empowerment.
- 3 Women teachers and women instructors in adult non-formal education programme should receive special orientation to enable them to play an activist role towards women's equality
4. Preference in requirement of teachers

be needed to create awareness of the incentives. More importantly, the demand for education of girls would have to be generated and sustained. This can be achieved by building up their collective strength and raising their self image.

Further, to facilitate enrolment of SC/ST girls, as of other poor girls, it would be necessary to follow an integrated approach wherein aspects of health and nutrition would be integrated with education. It would also be necessary to provide support services to the girls in the form of creches and aanganwadis. Further incentives would be required for recruitment of teachers from SC/ST girls even in relaxation of qualifications. This would

help to overcome the traditional prejudices against sending girls to schools with male teachers and also motivate other girls to avail of the facilities.

The quality of education, whether in the formal or in the non-formal stream, would need special attention in promoting education of SC/ST girls since they have very little to fall back upon in the family.

Finally, to ensure that the development of SC/ST girls does not fall short at any stage, it would be necessary for monitoring to be done separately for girls. In evaluation also, adequate care would have to be taken to focus on their educational development including participation and achievement.

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Female Education in Bengal Presidency

(1764-1854)

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Women's education in Bengal Presidency had a long tradition. The main recipients of this education were the women from zamindar families. The kind of education received was mainly religious in character. In the nineteenth century, the three main agencies that helped in promoting women's education were the Christian missionaries, the male intelligentsia of Bengal and finally the British Government. In this article a historical perspective of various efforts made by different agencies in promoting women's education in Bengal Presidency have been highlighted.

FEMALE EDUCATION formed an important part of indigenous education. Despite its limited character, it has a long tradition. Dayaram's *Saradamangala*, a seventeenth century Bengali work, shows that there was female education in the primary stage. The poet mentions five princesses reading in *pathasalas*. In Bharat Chandra's book *Vidyasundara* we find that Princess Vidya was highly educated and she even defeated many scholars in literacy debates. The *Mangala Kavyas* show that not only the daughters

of zamindars but even girls coming from the middle classes received education, along with the boys, in the *pathasalas*. Adam, in his *First Report*, also states that indigenous elementary schools were open to boys as well as girls in the early part of the eighteenth century.

There are various examples which show that educated women greatly contributed to literature. Anandamaji, the niece of poet Jayanarayana, was a poetess of fair repute and she composed *Harikila* in 1772 along with her uncle. The wife of

Yasovante Ray, a Brahman of Nasipur, understood accounts written in Bengali and the wives of Raja Navkrishna were renowned for being able to read. Many female medicants had some knowledge of Sanskrit and a still greater number were conversant with popular poetry in the dialects of the country. These examples clearly indicate that not all women of the age were ignorant.

The education of girls was probably a matter of private, rather than public concern. It was generally domestic and not institutional education. Tutors were employed by parents at home, chiefly to equip the girls with the knowledge and material necessary for domestic life.

In his *Second Report*, Adam states that the zamindars, by and large, instructed their daughters in the element of knowledge. The number of principal zamindars, according to Adam, in the district of Rajshahi was about 50 or 60, of whom more than half were females and widows. Of these, two—viz. Rani Suryamani and Kamal Mani Dasi—were said to possess a competent knowledge of Bengali writing and accounts. Therefore, female education was mainly limited to a particular section of society i.e. the zamindars or upper classes.

Fisher's *Memoir*, also gives a detailed account of female education. In his account he states that girls coming from the upper classes of society, i.e. zamindars, received some kind of rudimentary education. In his account he depicts.

There are not a few Hindu ladies among the upper classes in this city (Calcutta) that can read and that do read. In such cases, when they are children they attend the instructions of a guru mahasai, either in

their own houses, or at the house of some near neighbour.... By the time this is finished they are married. They are now removed from school, and for want of practice, soon forget to write. But they do not lose their knowledge of reading. Some of the matrons in the family—it may be an aunt—continue their study of Bengali with the little girl and she soon learns to read fluently. The books, with which the young women's minds are chiefly engaged are the following: *Ramayan*, *Mahabharat*, *Annada Mangal Chundi* and a few other works, especially such as .. of the incarnation of Krishna and the attributes of *Shakti* or *Durga*. The vernacular newspaper, especially the *Bhaskur* and *Probakhur* are in great demand with them. In one of the divisions of this city, called Bartollah, there are a great many printing presses employed in printing books, of which many are bought by respectable Hindu ladies. The other day we learned with great pleasure and surprise that a young married lady, being obliged to visit her mother, who (was) very ill, and who lived at the distance of six days' journey from Calcutta, took in her *palkee* (palanquin) a number of books for her travelling companions, to relieve the ennui of her journey.

However, by and large, girls were not educated because the notion of providing instruction to female children never entered the minds of parents. Moreover, a strong superstition existed among the people that girls taught to read and write would, soon after marriage, become widows. The Muslims also shared the prejudices of the Hindus against the instruction of female children. Besides these factors, poverty was also a great handicap which did not allow parents to give instruction to their daughters. Thus, female education was limited as far as

formal instruction was concerned, however, domestic education of girls existed and formed a significant part of indigenous education

Pioneering Contribution of the Christian Missionaries

The Christian missionaries played a significant role in promoting girls' education in the Bengal Presidency. They were motivated by humanitarian and evangelical zeal. In the early stages of missionary activity, the former was given more importance. Similarly, an article published in 1822, in the *Friend to India* not only announced the arrival of Miss Cooke and her initial efforts in education, but it also summarized the benefits the Baptists anticipated from the operation of their own and other schools. If women were taught to read the Bible most of their problems presumably would be solved. They would, it was naively thought, become pious, chaste, faithful and tender and also affectionate both as consort and as mother; and if widowed would be able to bear with patience and resignation any hardship rather than commit Sati.

The content of the article published in 1822, clearly indicates that the missionaries wanted to genuinely improve the status of women. They wanted to build the personality of women and enable them to develop a critical perspective. Thus the motives of the missionaries regarding female education, were therefore, based on humanitarian principles, as well as evangelical ones.

Missionaries' Agencies for Promotion of Education

The agencies through which the missionaries tried to promote female

education were

- (a) Day schools
- (b) Orphanages and boarding establishments.
- (c) Domestic or *Zenana* teaching arranged in the families of middle and higher classes.

Day Schools

The earliest day schools were begun by the Serampore missionaries in 1817. The classes of boys and girls were separated by a mat partition. The other school that was established for girls was by Rev. May of the London Missionary Society. The school was established at Chinsura in 1818. The number of scholars in May's school were 14. Besides young girls, even adult women enrolled themselves in schools established by May. The curriculum consisted of reading, writing, spelling, grammar, arithmetic, needlework. The Bible formed the most important subject of the curriculum.

Despite being the pioneers their effort was like a drop in the ocean. In fact, the first systematic endeavour for promoting girls' education was taken up by the Serampore Baptists. In 1819 they enlisted the support of several English ladies residing in Calcutta to form the Calcutta Female Juvenile Society. The main reason for forming this society was to provide education to girls in a more organized way. In 1832, the society changed its name to Calcutta Baptist Female Society for the establishment and support of Native Female Schools. Adam, in his *First Report*, states that the Thirteenth Report of this society indicates that there was one school in Calcutta, which contained 60 or 70 pupils, another at Chitpore containing 110 to 120 scholars, and one school at Sibpore

with 20 native children. Generally, the schools established by this society were superintended by a committee of ladies. The teachers were native women; sometimes even senior scholars performed the role of teachers.

Girls were generally taught reading, spelling and geography. In Sibpore school, English language was taught mainly to Christian girls. The Bible, once again, formed the core curriculum. In fact, the curriculum was in many ways a continuation of what existed in early missionary schools.

During this period, William Ward was trying to arouse the interest of the ladies of England regarding promotion of female education in India. He published pamphlets giving accounts of the degraded position of Indian women. He attended the annual meeting of the British and Foreign School Society in May 1821, and partly in consequence of his appeal regarding education of women in India, the society decided to send Miss Mary Ann Cooke to Bengal to teach girls. Miss Cooke arrived in November 1821, and as the funds of the Calcutta School Society were inadequate, her services were engaged by the Corresponding Committee of Church Missionary Society. In connection with this committee, Miss Cooke greatly expanded her educational work.

We find that by March 1823, she had established 15 schools with 300 girls. In the next year, i.e. 1824, the number of schools increased from 15 to 24 and the number of pupils from 300 to 400. This expansion of schools under Miss Cooke indicates that it had become very popular among the people. It also throws light on the fact that despite strong prejudices, female education was

gaining popularity.

The Corresponding Committee gradually found that students made rapid progress in Miss Cooke's schools. It was found that, on 23 June 1823, at the examination of Miss Cooke's scholars, 110 girls acquitted themselves well in reading Bengali and in needlework who had no knowledge of the subjects 17 months earlier.

The Corresponding Committee of Church Missionary Society relinquished the entire management and direction of females' schools to a committee of ladies who formed themselves into a society called the Ladies' Society for Native Female Education in Calcutta and Its Vicinity. The number of schools increased to 30 and that of pupils to 600.

The members of the societies realized that instead of further multiplying schools, it was necessary to concentrate them in one place. This was mainly because the missionaries faced the problem of procuring qualified female teachers. Also, Miss Cooke and the other European missionaries found it difficult to get girl "monitors" in sufficient numbers. Therefore, with a limited number of qualified teachers, the missionaries decided to establish a few Central Girls' Schools instead of establishing many schools in all areas. Thus, we find a Central School was established in 1828. The curriculum continued to remain the same, i.e. spelling, reading, writing, needlework etc. The Bible, once again, formed an important part of the subject.

By establishing Central Schools, the missionaries could overcome the problem of teachers to an extent, however they were faced with another problem—

centralization decreased the number of students in school. The guardians were not willing to allow their female wards to travel openly outside their locality. The missionaries believed that the fall in the number of female students was an important problem, but then it was compensated for by the advantages of continuous supervision.

During this period, day schools for girls were established at all the main mission stations in Bengal by the London Missionary Society at Chinsura and Berhampore as well as in and around Calcutta, by the Baptists at Katwa, Suri Dacca, Chittagong and Jessore, and by the Church Missionary Society at Burdwan, Kalna, Bankura and Krishnanagar.

Orphanages and Boarding Establishments

Apart from the day schools established by the missionaries, orphanages were also established by them. Most of these orphanages were open to both boys and girls. Adam, in his *Third Report*, gives a detailed account of orphanages established by missionaries. He states that in the district of Murshidabad an English Orphan Girls and Infants' School was established. Rev. Paterson of the London Missionary Society instructed pupils gratuitously. The number of pupils in his orphanages was 13. These students belonged to various castes. Apart from instructing the pupils in the three 'R's' knowledge of the Bible was also imparted. Scholars wrote their lessons on slate and on papers.

Most of these orphanages were superintended by the wives of the missionaries. Orphanages opened by the Church of Scotland in Calcutta, however, were the most important.

Zenana System of Education

The third important agency for spreading female education was "domestic education" or the *Zenana* system. The *Zenana* system of education was encouraged by missionaries, for it provided education to middle and higher classes. Womenfolk of respectable families generally did not go to day schools opened by missionaries. They received instruction in their homes by visiting teachers. In order that they might conduct the system with success, Eurasian and English tutors were given necessary training in the normal school attached to the Central School of the Ladies' Society. The *Zenana* system conducted by Rev. Fordyce and Mrs. Mullens succeeded in getting access to some of the aristocratic families of Calcutta. Miss Toogood of the normal school was well acquainted with Bengali. She became the first successful lady teacher under the *Zenana* mission. She instructed the ladies in their respective homes in reading, writing, letter composition and ordinary accounts besides scriptural teaching. Regular examinations were held behind the screen or *purdah*. Suitable rewards were given to those who were successful in the examination.

The main advantages of this system was that even the grown up ladies could acquire the rudiments of learning without going to school. For many years the *Zenana* system was popular in Calcutta.

Therefore, the three agencies through which the Christian missionaries promoted female education, helped them in gaining support from the people. The missionaries faced many problems. First, the strong prejudices against female education always proved

to be a major obstacle. Similarly, the emphasis on imparting the knowledge of the Bible and constant criticism of Indian religions and traditions made people very suspicious of their activities. Most parents feared that their daughters, by going to missionary schools, would be converted to Christianity. Though the missionaries constantly faced these problems, they continued to expand their activities regarding female education. Some of the missionaries were supported by the Bengali intelligentsia. For instance Raja Radhakanta Deb constantly supported Miss Cooke in her educational activities.

Section of Society that Had the Benefits of Missionary Education

Though the Christian missionaries pioneered female education, their activities remained confined to the lower sections of society. Adam, in his *Third Report*, states that he saw 175 girls in four female schools in the district of Burdwan in 1838. Of these one was Muhammadan, 53 were either daughters of Christian parents or orphans supported by missionaries, and 138 Hindus. Of the Hindu girls, 58 were Bagdis, 18 Muchis, 17 Bauris, 17 Domes, 12 Haries, six Vaishnawas, six Tantis, two Chandals, one Kurmi and one a Baiti. The various incentives which the missionaries gave to the students, e.g. rewards to successful candidates, prizes for regular attendance consisting of money and cloth, attracted many lower caste girls to missionary schools. Some Brahman girls also attended missionary schools.

Thus, in Bengal Presidency, missionaries played a pioneering role in promoting female education. However, their efforts were limited in

nature and mainly catered to the lower castes.

East India Company's Effort in Promoting Girls' Education

It was Lord Dalhousie who took interest in female education in India. His interest was clearly revealed when he supported J.E.D. Bethune's school for girls at Calcutta. In fact, when Lord Bethune died, Lord Dalhousie personally undertook the charge of the school.

The support which Dalhousie gave to Bethune was the first move by the government in promoting the cause of girls' education in India. His support of girls' education was reflected in the Educational Despatch of 1854. The Despatch stated that

The importance of female education in India cannot be overrated; and we have observed with pleasure the evidence which is not afforded of an increased desire on the part of many of the natives of India to give a good education to their daughters. By this means a far greater proportional impulse is imparted to the educational and moral tone of the people than by the education of men. We have already observed that schools for females are included among those to which grant-in-aid may be given and we cannot refrain from expressing our cordial sympathy with the efforts which are being made in this direction. Our Governor-General in Council has declared in a communication to the Government of Bengal that the government ought to give to native female education in India its frank and cordial support.

Thus, in Bengal Presidency, it was the Christian Missionaries and later, the

Governor-General, Dalhousie, and the East India Company that promoted girls' education. In fact, a beginning was made, though it was limited in nature, and by and large remained confined to the lower sections of society

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Status of Girls' Literacy in Selected Villages of Nainital District : A Preliminary Survey

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Before implementing any worthwhile intervention programme for raising the health and nutritional status of families, it is necessary to first assess the basic educational status of the community and if need be, work out supportive strategies to raise the same to a predetermined level. With this point in view, the investigators of the present study conducted a preliminary survey to find out the status of girls' literacy in selected villages and blocks of Nainital District. The findings of the present study indicate that majority of the girls are interested in attending school if opportunity is given to them and they are relieved of some of their household responsibilities.

GIRLS' EDUCATION is the first step in the normal and smooth running of their future family life. Their ways of accepting and receiving information and transferring their beliefs and attitudes are dependent on the basic literacy skills learnt by them. Keeping in view the importance of basic education for girls before planning and

implementing any intervention programme in the areas such as nutrition, health and family life, there is a need to assess their basic educational status in any community and work out supportive strategies for basic education. This is to be visualized in relation to the total picture of national literacy.

The national literacy campaign launched by the Adult Education Department of the Directorate of Extension gave a boost to the education of men and women. In the process, a number of women became literate and learnt how to write their names and acquired numerical and other social skills. The programme was focussed mainly on making adults literate whereas adolescents were not able to take advantage of this programme equally.

As education is a major sphere of concern for people dealing with issues in a girl's life, it is one of the most powerful instruments that can change the status of the girl child and will break the vicious circle in which she is entrapped. The year 1990, the SAARC year of the girl child and celebration of the SAARC decade of the girl child raised many important issues where discrimination was seen in the rearing of girl children—their feeding, caring clothing, provision of good education and opportunities for recreation.

India's and the world's endeavour to educate and make all people literate by 2000 A.D. would not be complete unless the other half of the population, i.e. girls and females, is considered equally, and the motto for the UNESCO summit (Education for All by 2000 A.D.) will be far fetched (*Times of India*, December 1993). According to the 1991 Census the literacy rate among women and girls reported was 39.29 per cent as compared to the total literacy rate of 52.21 per cent. Total adult literacy rate was reported as 62 per cent for males and 34 per cent for females.

Coming to the girl child, SAARC has defined the girl child as coming between the age group of zero to twenty years. Statistical data during the SAARC year of the girl child, 1990, revealed that school

enrolment ratio for Classes I to V was 115.7 per cent for boys and 42.3 per cent for girls, significantly less as compared to boys. School drop out rates for Classes I to V for boys was 45.84 per cent and for girls 50.27 per cent as reported in the UNESCO summit, 1993. For Classes VI to VIII it was 60.70 per cent for boys and 70.04 per cent for girls; the ratio is proportionately more for girls in upper classes.

In the State of Uttar Pradesh where the female literacy rate is very low, the enrolment ratio reported is 93.81 for boys and 56.08 for girls in Grades I to V and for Grades VI to VIII it was reported 58.58 for boys and 24.13 for girls (1991 Census, UP). Therefore, reviewing the situation of girls' enrolment in school and the drop out rate, the investigators felt the need for conducting a preliminary survey to know the status of girls' literacy in selected villages and blocks of Nainital District before planning and working out an intervention project on nutrition and health education for young and adolescent girls.

Objectives

The major objective of the study was to ascertain the overall status of education and literacy level among the selected group of girls for intervention programme in nutrition and health education in selected villages and blocks of Nainital District. The sub-objectives were

1. to ascertain whether girls are attending school or not;
2. to find out the drop out percentage among girls who attended school;
3. to know the various reasons for not attending school or dropping out from school;
4. to find out whether girls were interested in attending school.

Methodology

An exploratory survey using interview method was conducted. A semi-structured interview schedule was filled up by interviewing families.

Sample

A total of 150 girls were selected randomly from ICDS villages and university farm labour blocks.

Analysis

Categories were made for open-ended questions. Frequencies were counted for each response and percentages were calculated.

Background of the Respondents

The girls ranging from 8-16 years belonged to the lower socio-income group, income ranging from Rs.1000 to Rs.2000 and 42 per cent of the girls belonged to service class and 38 per cent belonged to agricultural labour class, 11.4 per cent were engaged in caste occupation, 8.6 per cent were engaged in private business also. The average size of the family reported was four to six members in 52.6 per cent of the families followed by six to eight members in 32 per cent and two to four members in 12.8 per cent families. As far as the education of the head was concerned, 55.4 per cent were totally illiterate, 15.4 per cent had studied up to intermediate, 12.6 per cent up to primary, 8.6 per cent up to Class VIII and 7.4 per cent up to high school. Majority belonged to joint families and 1.4 per cent to extended families.

Specific Findings

The exploratory survey revealed the following findings as per the objectives laid down:

Exposure to School

Data regarding exposure to school is presented in Table 1. Majority i.e. 65.4 per cent girls were not exposed to any schooling.

Drop Out Rate

Data regarding drop out rate presented in Table 2 revealed that out of the 52 girls exposed to school, 23 had left school for one reason or the other. Majority, i.e. 34.8 per cent girls had left school after reaching Grade II, and 17.3 per cent had left school after completing Grade V.

Reasons for Drop Out and Not Attending School

Reasons for drop out and not attending school given in Table 3 indicated that majority of the girls, i.e. 36.7 per cent, were not able to attend school because they were required to help with the household work. Another significant reason reported by 23.5 per cent girls was the lack of money available at home for arranging school uniform and stationery. Lack of guidance was reported as one of the reasons for not attending school by 20.4 per cent of the girls. Other reasons reported were "to look after siblings" and "being a girl".

Preference for School

Data regarding preference for school presented in Table 4 revealed that more than half of the girls, i.e. 55.4 per cent, wanted to go to school if given the opportunity, whereas 44.6 per cent girls preferred to stay at home. While interviewing girls, investigators observed that due to heavy work load at home and care of siblings the girls were not able to attend school.

TABLE 1

Frequency Distribution over Educational Level of Adolescent Girls

<i>S No.</i>	<i>Options</i>	<i>No. of Girls (N=150)</i>	<i>Percentage of Girls</i>
1.	Exposed to school	52	34.6
2.	Not exposed to school	98	65.4

TABLE 2

Frequency Distribution Over Number of School Drop Outs

<i>S. No</i>	<i>Categories No.</i>	<i>No of Girls</i>	<i>Percentage of Girls</i>
1.	First Grade	3	13.0
2.	Second Grade	8	34.8
3.	Third Grade	4	17.3
4.	Fourth Grade	2	9.0
5.	Fifth Grade	4	17.3
6.	Sixth Grade	1	4.3
7.	Seventh Grade	1	4.3

TABLE 3

Frequency Distribution over Reasons Stated for Not Attending School and Leaving School

<i>S No</i>	<i>Options</i>	<i>Number of Girls</i>	<i>Percentage of Girls</i>
1	Do not have money	23	23.5
2	To help in household work	36	36.7
3	To look after siblings	18	18.3
4	Being a girl	18	18.3
5.	Lack of guidance	20	20.4

TABLE 4

Frequency Distribution over Preference for School

<i>S No</i>	<i>Options</i>	<i>Number of Girls</i>	<i>Percentage of Girls</i>
1	Want to go to school	83	55.4
2.	Prefer to stay at home	67	44.6

Discussion

The finding of the preliminary survey conducted confirmed the earlier work done and statistics projected regarding school enrolment. As per the 1991 Census, the net primary school enrolment ratio of males was reported 109 and of females 83 during the years 1986–91. Even the world's statistics shows that two-thirds of the 100 million children of the world out of school are girls.

As per the present survey, majority of the girls, i.e. 34.8 per cent, had left school after reaching Grade II and 17.3 per cent had left school after completing Grade V as also reported by UNICEF (1994)—a nearly half of the drop out rate occurs in Classes I and II. The world average percentage of children reaching Grade V is 68 per cent. As far as rural India is concerned, out of every 100 girls enrolled in Class I, there are only 40 in Class V. The figure drops to 18 in Class VIII and the strength in Class XII is only nine. Despite enrolment being doubled during the year 1965–86, nearly 46 per cent rural girls in the 6–11 years age group are out of school.

Various research reports state problems such as poverty, early marriage, rural social structure and related low status of women as associated with drop out and not attending school. The findings of the present study also explained the reason for the rural social structure where girls are needed most of the time for household work. In the absence of child-care service, the girls, entrusted with the responsibility of siblings, were not able to get time to go to school.

It is heartening to note that the findings of the present study indicate that majority of the girls were interested in

attending school if opportunity were given to them and they were able to get time from household chores and alternative care for siblings were provided in the absence of their mothers.

Implications and Recommendations

It indicates need for family intervention and educating families to send their female children to school since schools are available in close proximity. But due to the absence of primary child care facilities and poverty, which forces mothers to collect fuel and do other agricultural work to earn money, the girl child is compelled to take on the responsibilities of household chores and siblings. Therefore, need for income generating activities and training of women is needed first, so that the economic situation could be eased and girls would be able to attend school. As per the Ramamurti Committee Report, the provision for centres for Early Childhood Care and Education (ECCE) should be located close to primary schools and their timings adjusted accordingly [*Times of India (TOI)*, August 1993]. This would relieve the girl child of the responsibility of sibling care and household chores.

A suggestion was made to have a primary school for each habitat with a minimum population of 300. Provision for female teachers in the village school was also suggested. Educational planning should take into consideration poverty and demographic characteristic and needs.

Education for All (EFA) means making 19–24 million children in the age group of 6–14 years and 121.3 million adults in the age group of 15–35 years literate (*TOI*, November 1993). Sixty per cent of the children in the target group of education for all are girls, while 62 per cent of the

for all are girls, while 62 per cent of the adults are women. Therefore, the target set within the broad framework of Education for All is the enrolment of an additional 5.61 million children of whom 67 per cent are girls.

Now coming to the relevance of the present preliminary survey for knowing the educational status of girls before giving them intervention in the area of nutrition education and family life education, it is felt by investigators that this intervention should be started with the following integrated strategies:

1. To provide basic literacy skills of reading and writing and numerical skills necessary for girls in managing their day-to-day life.
2. To educate the mothers of the subjects under study so that they allow them to learn literacy skills which will be a boon for their future family lives.
3. Such lessons on nutrition and family life education will only reach them when they have the basic literacy skills.
4. Moreover, the type intervention in nutrition and family life education should go all along and also be in tune with the Basic Education Project recently being funded and started in the State of U.P. with the aid of the World Bank.
5. Poverty being reported the second important reason for not sending the girls to school, income generating activities among the mothers of the subjects would be another important strategy.
6. However, campaigning in the area of girls' education, conducting meetings with the local influential leaders and involving the total village community are some of the other measures.

Girls' Education : Role of Teachers

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An important factor that comes in the way of achieving universal primary education is the low participation of girls. Education of girls is vital for effective socio-economic development, particularly in raising the health and nutritional status of the community, conforming to small family norm and reducing infant mortality. In this context, the author, in the present article, gives a detailed account of the teacher's role and his responsibilities to enhance enrolment and retention of girls.

Girls' Education : Present Status in India

WHEN one looks at the educational statistics, one can easily observe that enrolment and retention rates of girls are lower than those of boys. The number of girls who have never attended school is higher than that of boys. The reasons for low participation of girls in education at school level, and later, is because of the factors which are well known. These are (i) community's/society's prejudice against girls' education and preference for boys' education, (ii) absence of a desired demand for girls' education, (iii) parents' need for girls' help in sibling care, domestic chores or by becoming an economic unit of the family, (iv) adherence to traditional female

roles, (v) inadequate number of women teachers, and (vi) negative and discouraging attitude of teachers towards girls.

Poverty is one of the important factors, but since the Government is providing a number of incentives and facilities for promoting the primary education of girls, this aspect is being taken care of.

An encouraging trend of the 1991 Census is that there is an improvement in the literacy rate of women compared to that of men. As per these figures, 39.4 per cent of women are literate compared to 29.8 per cent in 1981. The decadal growth of female literacy is higher than male literacy though the fact remains that female literacy figures are much lower than male literacy figures.

Low participation of girls in primary education is one of the most important factors that comes in the way of achieving universal primary education. The enrolment of girls as a ratio of the total during 1991-92 is 39 per cent at the primary stage, 33 per cent at the middle stage, 28 per cent at the secondary stage and 23 per cent at the higher secondary stage.

Today universalization of primary education is one of the major goals and a matter of national concern. This is being backed by a strong political will. There is no denying the fact that primary education provides basic competencies required by individuals to cope with life situations both at present and in the future. It provides an individual with social benefits and makes the person receptive to new ideas and practices. A strong foundation of primary education is vital for educational, social and economic growth, as well as for all round development of the child's personality.

Very recently, the government has launched the District Primary Education Programme in eight States covering 43 districts. One of the important criterion for launching this in States and districts is that these should be low female literacy States and districts. Special attention is to be given to girls' education. The focus is on reducing gender disparities. Universalization of Girls' Education Bill is with the Parliament. It has categorically stated the responsibility of the State to make education accessible to girls with all necessary support. The parents of the girls will be responsible for ensuring that girls go to schools. Not sending girls to school will be treated as a cognizable crime. In Rajasthan, Shiksha Karmi Yojna and Lok

Jumbish are taking care of girls' education.

Mahila Samakhya is working to create a demand for girls' education in the districts of Uttar Pradesh, Karnataka and Gujarat.

As stated earlier, Universal Primary Education is still distant in our country. It is very important and essential for teachers to realize how significant girls' education is for achieving universal primary education. They should

- be able to discuss the significance of girls' education
- transact curriculum without gender bias
- acquire competency in motivating parents/community in favour of girls' education
- acquire skills for encouraging girls to remain in school

Significance of Girls' Education

A quick glance at Table 1 will give an idea about the significance of girls' education.

The table establishes the following

1. Girls' education affects the economy of the country. There is an overall impact of education on the economic betterment of women, their families and on the society as a whole.
2. Girls' education and literacy levels have a direct impact on health, nutrition and family planning. Educated mothers have healthier families. There is an inverse relationship between girls' education and infant mortality. It has been established that maternal education leads to reducing child mortality rates.
3. Levels of education of the mother increase the children's chances of

TABLE 1

Significance and Impact of Girls' Primary Education

<i>Universal Primary Education</i>	<i>Economic Productivity</i>	<i>Social Development</i>	<i>Inter Generational Education</i>	<i>Sustainability of Development Efforts</i>
— higher percentage of children participating in and completing basic education	— higher GNP per capita	— reduced maternal and infant mortality	— increased number of those enrolled and retained in schools	— increased number of developmental initiatives
	— increased skilled labour participation in organized and unorganized sectors	— lower fertility rates	— greater awareness and appreciation for girls' education	— increased participation in social development initiatives
	— increased self employment	— improved sanitation		
	— improved home production	— increased life expectancy		
		— better standards of living		
		— improved status of women in the family/ community		
		— higher self esteem among girls and women		
		— awareness about existing laws that helps women		

Adapted from 'Strategies to Promote Girls' Education', UNICEF, New York, 1992

- getting immunized and thereby increase their chances of survival.
4. Mothers' education appears to reduce the negative effects of poor community sanitation and water supply
 5. Girls' primary enrolment is positively correlated with life expectancy
 6. High female literacy correlates with lower fertility rates. The correlation between low literacy rates and high fertility rates is strong. Educated women generally marry late and are likely to practise family planning and have smaller families.
 7. Girls' education has "a positive impact on girls' education for future generations." Education of the mother is more important than any other member in the family. The mother's positive attitude about education ensures her daughter's education
 8. Educated girls/women have better job opportunities.
 9. Education increases the status of women — makes them self-confident and economically independent

Strategies

Research on classroom interaction shows that active student participation in classroom leads to higher achievement and more positive attitudes. Studies have also shown that achievement of Minimum Levels of Learning is lower in the case of girls than boys. One of the important factors leading to this could be that most teachers have more interaction with boys in four categories — approval, instruction, listening to the student and disapproval. Teachers can improve the learning climate for girls by

1. Giving them right to agree or disagree
2. Allowing them to speak without

interruption.

3. Not allowing the boys to bully girls (inside and outside classroom).
4. Asking girls to practise saying something positive or appreciative to each other.
5. By treating all students as equals, since teachers are a role model for them and making sure that girls attempt the given tasks themselves
6. Being and consistent in their behaviour.
7. Being tactful.
8. Talking about all career choices and make it clear that both boys and girls can take up any profession.

It has been observed that most teachers give willing attention to those students who perform well in class. The students who are weak get neglected. The teachers do not make an effort to give them a 'push up', their parents discourage them at home, their peer group makes fun of them. The total result of this neglect is that these students (most of these are girls) get pushed out as they lose interest and leave school. It is necessary that teachers take care of all children and see that all achieve the minimum level of learning. Needless to say that in the teacher's hurry to finish the courses, the weak students get neglected and in this, the number of girls is more than that of boys.

As already pointed out, a teacher is a very important person in the process of education of girls. He/she will have to work harder and give enough time and attention to girls in his/her class. The teacher should keep the following in mind :

- parents/community are often indifferent to girls' education;

- those who are in school drop out easily;
- it is crucial to keep girls in school to successfully tackle the problem of inadequate number of women teachers.

In the Classroom

Teachers must directly/indirectly encourage the girls. Those who are good in studies will continue doing better, but even those who have not achieved minimum levels of learning, will begin to gain confidence. Continued support from the teacher will surely help them attain the required level of achievement. It may not be possible for a teacher to look after all the weak children, especially girls. In such a situation a teacher can take the help of those who are brilliant. Here, a caution is to be exercised so that the weak students do not develop a complex.

The teacher's attitude is very important. The girls can drop out (even if there is a woman teacher) if teachers humiliate or belittle a girl for her poor performance. The teacher must make an effort to find out the reasons for her weak performance and then try to help. There is need to be careful and cautious so that the teacher's behaviour does not hurt or discourage the girls. Teachers could practise invitational education. It believes in the self concept approach to educative processes. Its four basic principles are

- 1 People are able, valuable and responsible and should be treated accordingly
2. Teaching should be a cooperative activity.
- 3 People possess relatively untapped potential in all areas of human development.
- 4 This potential can be best realized by

people, places, programmes specifically designed to invite development. The teachers, in this case, must personally and professionally invite themselves and others (students, parents, administration).

Textbooks are being revised to ensure that children don't grow with ingrained/fixed images of girls/women.

Transaction of curriculum is of great relevance both before and after the textbooks are revised for removal of gender bias

1. Till the textbooks are revised, teachers will have to transact the curriculum consciously by negating the negatives and introducing the positives during classroom interaction. A number of positive examples can be given
- 2 A lot will depend on the teacher's own attitude. If he/she is not sensitized to the significance of girls' education and the danger of gender bias, it is possible that even with a revised textbook, there is bias in the transaction of curriculum. There is need to check this not by an office order, but by making a conscious effort to realize its implications in the long run

It is often argued that it would mean a lot of burden on a teacher. Since long it has again and again been recommended by committees on education that local girls be encouraged to become teachers. One could even talk about involving the educated daughters-in-law also. When women teachers hail from the villages where they are required to teach they can organize a campaign for educating girls with the help of village panchayats, village education committees, Mahila Mandals, NGOs, elders of the village (both men and women). Teachers can bring attitudinal

change with the support of the community so that it facilitates girls' education. The contribution of local women teachers would be immense as

1. Parents would begin to think in terms of their daughters' education.
2. They would not be anxious about her safety because they would know the local woman teacher.
3. The teachers would be a role model for the girls in her village. She can inspire the girls because she would be familiar with the problems that come in the way of girls' education.
4. The community would realize the significance of girls' education

What Can Teachers Do for the Enrolment and Retention of Girls ?

They can work with the parents to increase their awareness about the significance of girls' education by

1. Organizing evenings to discuss how educated girls/women have achieved a lot. Efforts can be made to bring some of these women who can speak about their achievements and how education has helped them. Local women police officials, doctors, lawyers, nurses can be invited. They can request these eminent women to write short autobiographical notes — these can be used in classrooms to inspire girls. Parents would surely begin to realize the significance of girls' education.
2. Holding meetings in the community with the help of local women, members of the Panchayat, Mahila Mandals and the Village Education Committees for motivating public opinion in favour of girls' education.
3. Involving parents in campaigns for girls' education.

4. Convincing parents that their daughters can perform very well at school if they have support from home. The girls are capable of joining all professions, achieve eminence and contribute to the healthy growth of their family.

Once the girls are in school, teachers have to see that they complete schooling. This can be done by

1. Improving the learning climate for girls. Teachers should encourage girls to participate in discussions, debates, involve them in making posters, organizing essay competitions on achievements of old girl students of the school who are now earning, are economically independent and handling all kinds of situations.
2. Taking care of the hidden curriculum — classroom interaction and management are very important for making girls perform better. Teacher training, revised textbooks which are free from gender bias will be of little help till teachers change the dynamics of the classroom. The way teachers act and interact in the learning climate of their classroom forms a 'hidden curriculum'. It is this which, more than anything else, determines the relative educational disadvantage affecting girls/women. This can be changed instantaneously by teachers. They only need to realize that for keeping girls in school, they have to make an effort to encourage them and counsel those who are getting disinterested/discouraged.
3. *Action Research*. With the help of colleagues, active students, parents and community leaders, teachers can try to find out the specific reasons

for girls' non-enrolment and dropping out. For this they can make a very simple questionnaire—functional not scholarly. After analysis of the situation what is to be done areas of concern should be decided. It is important that teachers try talking to people who matter in girls' education. It is more important to be positive even when they face some resistance (from parents and the community).

Teachers must evaluate aspects of their own teaching style, understand the dynamics of their classroom and increase

their own awareness. Action research would enable teachers to improve their teaching skills and the quality of learning experience of girls.

Teachers can make a beginning—initially a few girls would achieve better, but eventually more and more girls would achieve better. With consistent effort, teachers can make this a continuous process. With the efforts of teachers, parents and the community more and more girls will be able to complete school education. Once this is taken care of, girls will begin to go in for higher education in big numbers.

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A Study of Problems Faced by Girl Students in Women's Polytechnics

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With renewed stress on vocational and technical education for girls, many girls today are opting for non-traditional vocational courses, particularly those which are engineering based. A variety of such courses are now being offered by women's polytechnics. Due to various socio-cultural factors the girls are likely to face some problems both in the academic and employment fronts. The present study is an attempt to identify such problems and their intensity in a women's polytechnic in Andhra Pradesh

A DEVELOPING country like India requires the pursuit of technical education, new innovations and updated technology for its growth and prosperity. Hence, investment in technical education and training of technical personnel is an objective which is being implemented intensively

The emergence of women's polytechnics in various parts of the

country is an outcome of the objective mentioned earlier. It is the women who are the backbone of any family and also the moulders of India's future citizens. Therefore, it is but appropriate that girls should have an equal opportunity to technical education as part of the development process. In Andhra Pradesh, particularly in Chittoor district, there are four polytechnics. Two of them are for

boys, one, located at Tirupati and the other at Madanapalle for Scheduled Castes and Scheduled Tribes. The other two are for girls—one at Palamaner and the other at Tirupati. All the polytechnics are run by the Government of Andhra Pradesh and the girls' Polytechnic at Tirupati is run by Tirumala Tirupati Devasthanams. It is in this polytechnic, that the present study was conducted. Tirumala Tirupati Devasthanams has established this polytechnic to provide an opportunity for girls in the backward regions of Rayalaseema to gain technical knowledge and pursue professional careers. However, education in general and technical education in particular, bring along with them certain systems which have become institutionalized. For instance, right from the first stage of seeking admission to a technical education course to the gruelling exercise of the examination system and the process of internal evaluation create problems of various sorts particularly for the girl students. Indian girls, by and large, are brought up to be dependent and are conditioned to think of themselves as secondary human beings. Further, they are discouraged from being competitive, aggressive, and evincing interest in the pursuit of education. Their social interactions are also very limited. They are often taught to be submissive and obedient to the point of not even questioning any issue which might affect them. Hence, in the present study the investigators have attempted to identify the various problems which are likely to be faced by the girl students and also to study the intensity of the problems as expressed by the girl students in the women's polytechnic.

Objectives

1. To identify the various problems faced by the women students
2. To study the intensity of the problems faced by them
3. To compare the intensity of the problems as expressed by women students studying different courses.
4. To provide suitable strategies to overcome these problems

Methodology

Area of Study

Tirupati, Chittoor District, Andhra Pradesh

Selection of Sample

Women students of Sri Padmavathi Women's Polytechnic studying the following courses being offered at the time of the present investigation

1. Diploma in Pharmacy
2. Diploma in Electronics and Communication Engineering
3. Diploma in Computer Programme and Commercial Practice.

Sample Size

All students who had enrolled for the three courses mentioned above, comprised the total sample. The break up is as follows:

1. Diploma in Pharmacy (D Ph) N= 58
2. Diploma in Electronics and Communication Engineering (DECE) N = 71
3. Diploma in Computer Programme and Commercial Practice (DCCP) N = 34

The checklist used for the purpose of eliciting information from the respondents

was already field-tested. The checklist included various items under the following heads

	<i>No of items</i>
1. Financial problems	3
2. Infrastructure facilities	14
3. Psychological problems	26
4. Administrative problems	10
5. Personal problems	24
6. Other associated problems	10

These items were shuffled and included in a random way in the checklist. This was done to have a true measure of the students' problems without hinting at the various classifications under which each item would appear.

Measurement of Intensity of Problems

Against each item, the students were asked to indicate on a three point scale whether the problem was least, moderate or severe in intensity. Accordingly, intensity of the problems were given a score of 1, 2 and 3 respectively. Thus the intensity of the problems faced by each student was measured and the data was analyzed accordingly. The analyzed data is presented under various headings in tables as indicated in the ensuing discussion.

Findings of the Study

The findings of the study are presented under specific headings and a comparative discussion on problems faced by students in different courses are presented below.

Financial Problems

The data in Table 1 accentuates one single point, i.e. irrespective of the nature of the technical course all students faced financial problems in their education.

TABLE 1

		Intensity of Financial Problems		
S. No	Subject	<i>Financial Problems</i>		
		<i>Least</i>	<i>Moderate</i>	<i>Severe</i>
1	D.Ph. N=58	18.97 (11)	22.41 (13)	58.62 (34)
2.	D.E.C.E. N=71	12.68 (9)	23.94 (17)	63.38 (45)
3	D.C.C.P. N=34	20.59 (7)	79.41 (27)	---
Total		16.56 (27)	34.97 (57)	48.47 (79)

Figures in parentheses indicate actual number

Among the students of Diploma in Pharmacy (D.Ph.), Diploma in Electronics and Communication Engineering (DECE) and Diploma in Commerce and Computer Programme (DCCP) the majority stated that financial problem was a severe constraint in their education. What affected them most was their dependence on their elders for financial help. The other issue which caused concern was the apprehension whether investment in technical education would pay dividends. The other worry which affected their studies was whether their education would be a costly burden on their parents' limited finances. Overall, 48.5 per cent of the students expressed financial problems to be a severe one, while 35 per cent stated it to be a moderate problem.

Problems of Infrastructure in the Institutions

Table 2 outlines problems of infrastructure

in the institutions as faced by the women students in technical education. It is heartening to note that no student indicated infrastructure facilities in the institutions to be a severe problem

TABLE 2

Intensity of Institutional Infrastructure Facilities as Problems for Women Students

S. No	Subject	Infrastructural Problems		
		Least	Moderate	Severe
1.	D.Ph N=58	68.97 (40)	31.03 (18)	---
2.	D.E.C.E N=71	63.38 (45)	36.62 (26)	---
3.	D.C.C.P N=34	64.71 (22)	35.29 (12)	---
Total		65.64 (107)	34.36 (56)	---

In fact, majority of the students have stated infrastructure facilities to be of least hindrance to their education. This is very encouraging because the pursuit of education, especially technical education, requires laboratories which are well equipped, adequate furniture, spacious rooms, hostels and recreational facilities to promote quality education. Evidently, women students of the polytechnic have been well provided with good infrastructural facilities since totally 65.6 per cent of the students indicated it to be of least intensity.

Psychological Problems

The fear of being unable to perform well

or being below average is one which haunts every student. In a technical education course, the pressure of having to compete with fellow students is even more because of the professional orientation of the course.

TABLE 3

Intensity of Psychological Problems

S. No.	Subject	Psychological Problems		
		Least	Moderate	Severe
1.	D.Ph. N=58	18.97 (11)	48.28 (28)	32.73 (19)
2.	D.E.C.E N=71	32.39 (23)	67.61 (48)	---
3.	D.C.C.P N=34	17.65 (6)	50.00 (17)	32.35 (11)
Total		25.54 (40)	57.06 (93)	18.40 (30)

The data in Table 3 indicate that overall 57 per cent students expressed psychological problems to be a moderate problem. Fear of examination, comparatively poor performance, intensive studying, lengthy working hours, fear of being unable to retain were some of the psychological factors which caused problems for the students. Further, personal disabilities such as improper planning of study schedule, inhibitions and feelings of inferiority curbed the students' free participation in classroom discussions. Fear of ridicule by fellow students, dependency, inability to express feelings and share with friends, tiredness, lack of appreciation from fellow students are some of the other

psychological problems experienced by the women students

Administrative Problems

TABLE 4

Intensity of Administrative Problems Faced by Women Students

S No	Subject	Administrative Problems		
		Least	Moderate	Severe
1	D.Ph N=58	25.86 (15)	60.35 (35)	13.79 (8)
2	D.E.C.E N=71	28.17 (20)	71.83 (51)	---
3	D.C.C.P N=34	41.18 (14)	20.00 (58.82)	---
Total		30.06 (49)	65.03 (106)	4.91 (8)

Quite predictably, administrative problem was expressed to be a moderate one by 65 per cent of the students. A fair percentage of students indicated this to be the least of all problems. The D.Ph. students expressed it to be a severe problem (14 per cent). The main problems for the D.Ph. students were scarcity of textbooks in the library, inadequate teaching staff and insufficient educational experiences. The other reasons given by the students of all the three groups were lack of experienced staff, detention on failure to get an aggregate of 40 per cent marks. Gender bias in job selection in governmental institutions, limited staff and inconvenient library timings were other problems faced by them. Also lack of coordination between educational institutions and other

industrial institutions during apprenticeship and reluctance by the management to recognize student needs were other hindrances in their educational courses.

Personal Problems

In addition to financial problems, infrastructure problems, psychological problems and administrative problems, the students also experienced personal problems in their education.

TABLE 5

Intensity of Personal Problems

S No	Subject	Personal Problems		
		Least	Moderate	Severe
1.	D.Ph N=58	31.03 (18)	68.97 (40)	---
2.	D.E.C.E. N=71	30.99 (22)	69.01 (49)	---
3	D.C.C.P N=34	47.06 (16)	52.94 (18)	---
Total		34.36 (56)	65.64 (107)	---

More than 65 per cent of the students indicated personal problems to be moderate. No one particular reason was highlighted by the students. In fact, many problems such as lack of class notes given by teachers, insufficient leisure time, difficulty in tackling the courses, adjustment with the medium of instruction, the examination system, completion of assignments within stipulated period, strict enforcement of rules and regulation by the college

authorities, school atmosphere, inability to participate in extra-curricular and co-curricular activities due to lack of leisure time and inability to pursue individual interests and hobbies prevented the women students from performing. However, it is to be noted that personal problems were not severe for the students.

Other Associated Problems

Apart from the problems which have already been mentioned there were a few other problems which are presented in Table 6.

TABLE 6

Intensity of Other Associated Problems

S. No	Subject	Other Associated Problems		
		Least	Moderate	Severe
1	D.Ph N=58	34.48 (20)	65.52 (38)	---
2	D.E.C.E N=71	38.03 (27)	61.97 (44)	---
3	D.C.C.P N=34	44.12 (15)	55.88 (19)	---
	Total	38.04 (62)	61.96 (101)	---

Various other problems relating to their student life such as interaction with teachers, medium of instruction, non-existence of guidance and counselling, difficulty in procurement of textbooks in the market, absence of follow-up to the laboratory experiments and lack of prescribed textbooks for the courses were associated problems for the students in all three courses (62 per cent). However, the

students indicated that these associated problems did indeed affect their performance.

Strategies to Help the Students in Overcoming These Problems

From the preceding discussion, it is evident that though students of all three courses were pursuing technical education, their problems varied. From this it follows that each course has certain limitations as far as teaching and learning techniques are concerned. Personal problems which were the drawback for D.Ph, students could be tackled by establishing guidance and counselling centres. Similarly, financial problems and psychological problems which were affecting the studies of the DCCP students may be resolved by providing incentives in the form of stipends or increasing number of scholarships for meritorious students and those belonging to economically poor sections. The students of DECE course were finding financial and administrative problems to be a deterrent to their studies. Hence, it would only be appropriate for promoting greater interaction between the teacher and the taught and also the administrators for solving such problems.

The investigators of the study wish to emphasize the necessity for resolving problems which arise for the students while pursuing their studies, otherwise the performance of the students and the quality of technical education would be affected. This, in turn, would affect the lives of young girls who have emerged from societal and self-imposed restrictions to make a meaningful life for themselves.

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Gender Equality and Classroom Dynamics

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Participation of girls in certain fields of education like science, vocational, technical and commerce education have generally been found low. Though various attempts have been made in recent years to ameliorate the situation, gender differences can still be seen within the classrooms. In the present study, the author has attempted to formulate a set of action points to eliminate gender biases within primary classes based on a case study of classroom dynamics. The study uses the method of non-participant observation in Classes 1 to 5. The author is of the opinion that only a teacher can implement these action points for promoting equal educational opportunities within the classrooms.

PROVISION OF equal educational opportunities to girls has been a priority area in the educational sector since Independence. Recently, the National Policy on Education (NPE) 1986, envisaged that education would play a "positive interventionist role" for achieving a basic change in the status of women. In spite of concerted efforts made so far, the education system has not made the desired impact as is visible in the apparent gender differentiation seen at the higher levels of education, in areas such as subject choice and career aspirations. The Programme

of Action (1992) has categorically stated that "it is imperative that participation of girls is enhanced at all stages of education particularly in streams like science, vocational, technical and commerce education where girls are grossly under-represented". What needs to be recognized and acknowledged by both policy makers and practitioners is that the attitude and expectations that culminate in girls opting for stereotyped subjects and traditional vocations have their roots firmly embedded in the earlier basic level of education. This highlights the need for introducing

intervention strategies to eliminate gender biases and sex role stereotyping at the primary level itself thereby providing equal opportunity, choices and chances to both the sexes from the very beginning.

Reorganization of the primary school system is required in order to foster a gender inclusive education, ensuring that capacities and potentialities of girls and boys are fully and equally realized. This can be achieved by providing a challenging learning environment which is socially, culturally and educationally supportive for both sexes. It is in this context that the concept and role of classroom dynamics assumes tremendous significance. For the purpose of this study, classroom dynamics is operationalized as "aspects of people's behaviour that create a classroom environment based on interactions between teacher and the pupil, between pupils, seating arrangements and movement around the classroom by those in it. All these factors interact affecting the way children learn and the opportunities provided to them for doing so."

Aim of the Study

The present study attempts to formulate a set of action points to eliminate gender biases within primary classrooms based on a case study of classroom dynamics. All the strategies suggested are deliberately planned for application within the classroom setting by the teacher. Thus the area of operation is very specific in nature.

Objectives

1. To study classroom dynamics and identify weaker areas as related to gender equality in primary classes.
2. To develop positive action points on

various aspects of classroom dynamics for removal of gender discrimination within primary classes, ensuring equality of educational opportunity.

3. To be a starting point for school staff to tackle basic issues pertaining to equal educational opportunity, at the primary level.

Method

A case study was carried out using the method of non-participant observation of Classes 1 to 5, in a coeducational public school in New Delhi. This was done over a period of two months, during the regular school hours. For this, certain aspects within the classroom were observed and studied. These were:

1. Overall interaction between teacher and pupils, student and student in Classes 1 to 5
2. Seating arrangements in the classes
3. Teacher's behaviour towards boys and girls
4. Assignment of duties and responsibilities to boys and girls by the teacher.
5. Teaching-learning process as related to classroom dynamics

Result

A summary of the major observations are detailed out below under two sections—classroom organization and lay-out, and classroom interaction.

Classroom Organization and Lay-out

In all the classes that were observed, there were 33 to 40 children of both sexes. Every child had a table and a chair. They were seated in groups of two. All the children faced the blackboard and were seated in rows. The teacher had a table and chair

in front of the classroom, near the blackboard. All the classes had a cupboard for storing books and other materials. There was not much space to move around the classroom. Most of the classes had a colourful display of charts, pictures and other objects on the walls.

Seating arrangement of pupils was either teacher directed or chosen by themselves. The seating arrangement in each classroom was according to a set format and not as per the needs of the teacher or pupils. In Classes I and II, seating arrangement tended to be more flexible. In Classes III, IV, and V, classroom furniture arrangement tended to be more traditional with evidence of less flexibility. This was largely due to a large number of pupils in the higher classes and the more formal nature of classroom work at this level. Children preferred to sit in sex dominated groups of two if given the opportunity to decide their seating arrangement.

Mixed sex seating arrangement was only seen when enforced by the teacher, for the following reasons.

- 1 Socially, the child had trouble or had a behaviour problem,
- 2 The child had a medical condition, for instance, poor eyesight that required him/her to sit close to the teacher or blackboard
- 3 Lack of extra tables or space for one to be put.

If a boy was seated at the front of the room there was evidence to show that this seating arrangement resulted from one of the reasons listed above.

Girls tended to sit closer to the teacher or in front rows in most classes and moved around the classroom lesser than boys. Most of the teachers hardly moved around

They instead preferred to stand in front of the class, near the blackboard, while teaching.

Classroom Interaction

Majority of the tasks were being done individually by children, or two girls/two boys. Group work was seen very rarely, except when small projects were being done. A higher and neater standard of work was expected from the girls by the teacher. More girls felt that they did not do their best. Girls who requested help in their work were not helped as often as boys by the teacher.

Teachers directed more questions at girls than boys. They were more relaxed and friendly with boys and shared little jokes with them more often than with girls. At the same time, when reprimanding pupils, teachers scolded boys more than girls. The girls tended to be quieter and they remained in their seats more often than the boys. They preferred to sit and chat in their free time whereas boys preferred to play.

Boys took the lead more often in doing tasks than girls in most classes, and were also more vocal. They also disrupted the class more often than girls but were not reprimanded so frequently for this. The girls did not disrupt the class as often as boys but when they did, they were quickly reprimanded and told that this kind of behaviour was not expected from girls.

Teachers found it easier to control girls than boys. They generally asked girls to help those children who needed help with their work. It was very rare to see a boy being told to help his peers.

Boys came forward to do duties outside the classroom more often than girls. Teachers encouraged this by giving more

outside/heavy duties to boys than girls.

At times stereotyped language was used by the teachers, i.e. 'don't cry like a girl', or 'don't be a sissy' if a boy happened to cry. Most of the time this was done quite unconsciously by the teacher

Action Points

Based on the above major observations certain action points have been delineated to counter the gender biases observed, for promotion of equality of educational opportunity within classes

There are however, two basic prerequisites that are essential prior to implementation of the action points listed below. First, there is need to recognize that the problem of gender bias exists. This is the stage of 'awareness and realization'. Second, recognizing that there is a problem the teacher needs to take it seriously enough to do something about it through action. The teacher needs to collect facts to identify the problems. This is the stage of 'exploration and planning'. By listing out the various action points under different headings it is hoped that the teacher will be able to effectively plan suitable strategies

Action points have been classified into four categories for purposes of clarity and ease in implementation by the teacher.

These are as follows

1. Seating Arrangement
2. Behaviour
3. Assignment of duties and responsibilities
4. Teaching learning process.

Seating Arrangement

- i Seating arrangement can be based on the alphabetical list in the class attendance register

- ii Children need to be guided in mixed seating patterns, by using the cooperative learning approach in the teaching-learning process
- iii Movement of children needs to be encouraged so as to avoid sexist groupings.
- iv. Seating in a circle should be used to the maximum, to permit more talking and sharing between boys and girls.
- v Children should not be separated according to sex or be allowed to separate themselves in this manner, for seating purposes
- vi Opportunities should be created for girls and boys to work cooperatively, promoting sharing in mixed sex groupings.
- vii. Tolerance of differences needs to be inculcated by varying the organization of pupils in the classroom. Work situations which mix friendship groups and sexes need to be used more frequently
- viii A child's sex should not be used as a basis for organizing any class activity. For example, have mixed sex lines and project groups
- ix Specific classroom areas for various activities based on sex stereotyping, should be avoided. For example, in the lower classes (1 and 2) the 'home' corner for girls and 'construction' for boys
- x Children must be encouraged to participate in activities that have been traditionally seen as either male or female such as cooking or woodwork
- xi. Verbal encouragement followed by role model examples will further help in challenging sex-stereotyping by actively involving parents in areas such as reading, excursion duties,

supervision, gardening and other activities.

Behaviour

- i. A particular group of children or individual should not be allowed to dominate the class discussion or the teacher's attention
- ii Attention should not be concentrated consciously or unconsciously on the most vocal or the most disruptive group
- iii Assertive and confident behaviour in girls as well as boys needs to be developed through games, discussions, assignments and duties.
- iv Children who remain quiet and are well behaved should not be ignored, as it is normally the girls who behave so.
- v Girls as well as boys should be encouraged to speak up, voice their opinions, answer questions and generally become more vocal in a constructive way
- vi Boys and girls should be taught to respect each other's opinion
- vii All children's sensitivity to the feelings of others needs to be praised
- viii Ridiculing boys for showing caring/sharing behaviour should be avoided.
- ix All children should be expected to show caring behaviour towards others. Girls alone should not be singled out for this purpose
- x Stereotyped attitudes and language, i.e. 'naughty' boy, 'cute' girl, etc should not be used at all
- xi Encouraging competition between boys and girls by making comparisons between their work and behaviour should be avoided

Assignment of Duties and Responsibilities

- i. It is vital that duties and responsibilities in a class are seen as the prerogative of both sexes. Boys clearing the dustbins and girls distributing or collecting books enforce sex role stereotypes. Similar activities should be planned for both boys and girls
- ii All tasks should be allocated on a non-sexist, non-traditional basis
- iii Both sexes should share the light and heavy duties in the classroom.
- iv Boys should also be expected to be as tidy as girls.
- v Leniency towards boys when they fail to complete work or to do their homework neatly is to be avoided.
- vi Both boys and girls should be expected to be equally courteous and polite to all
- vii Comments made by children that reflect discriminatory or intolerant attitudes should be discouraged.
- viii Commenting favourably and equally on girls' and boys' improved behaviour is essential
- ix Negative comments to boys and girls as related to their sex roles should not be made
- x. No disciplinary measures should be used that encourage hostility and rivalry between boys and girls
- xi Never seat a boy near a girl as a punishment
- xii Discrimination between the type of punishment given for the same wrong to boys and girls is to be avoided
- xiii Praise and approval should be expressed in the same way to both boys and girls
- xiv Equal attention and encouragement

should be given to both boys and girls in all subject areas and in all classroom related activities

Teaching-Learning Process

In the teaching-learning process, cooperation and collaboration between boys and girls should be encouraged and monitored. This can be advocated by the teacher through

- i. Selecting the task /activity to be done.
- ii Making decisions about the organization of work
 - (a) size of groups
 - (b) forming groups based on activity or interest
 - (c) equipment and resources to be given
- iii. Revising or teaching a skill
- iv Outlining the procedure
- v Monitoring group work
- vi. Providing feedback
- vii Allowing groups to set and evaluate their goals
- viii Evaluating the outcomes. With this kind of format for group work, rewards should be given based on group performance; this will encourage sharing of duties and tasks by both

sexes Every child, irrespective of whether it is a boy or girl, has his/her share of the goal/tasks to be accomplished by the group.

- ix. Questions should be directed to girls/boys alternately as far as possible,
- x. A pattern should be adopted when asking questions and helping pupils;
- xi. Ratio of girls and boys in any activity should be equal as far as possible,
- xii. Nature of group dynamics should be monitored, i.e who takes the initiative, decisions, time taken, interruptions, etc and interventions made

Gender discrepancies and biases did exist at the primary level, in the school under observation. However, identification of these weaknesses and stereotypes in classroom dynamics has led to the development of positive action-oriented strategies. It is for the teacher to implement these action points for improving classroom organization, interaction and teaching-learning process within Classes 1 to 5, thereby promoting equal educational opportunities for the girl child

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Planning for UPE of Girls and Women's Empowerment : Gender Studies in Haryana

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Gender studies were conducted in four low female literacy districts of Haryana, namely, Kaithal, Jind, Hissar and Sirsa during October '92 to March '93 with a view to building in the gender equality component in the District Primary Education Programme at the project planning stage and during implementation. Haryana has nearly resolved the problem of access by providing every child a school within 1.29 km and a Junior Primary School for 30 children or more for scattered populations. Girls' enrolment, retention and achievement rates fall below those of boys at the primary stage. Serious gender gaps exist in many HRD indicators like sex ratio, mortality rates, health status, educational and work participation. Female life is undervalued and undermined.

Gender studies provide the bench mark data on educational and social status of girls and women and indicate areas of intervention for promoting UPE (Universal Primary Education) among girls, and women's empowerment. Major findings and suggested interventions are presented in this paper based on the combined data of four study districts for a total of 999 households, 256 drop out girls, 220 never enrolled girls, 117 teachers, 76 educational administrators, 160 discussions. Issues of access, causes for continuance, discontinuance and non-enrolment are dealt with. Additionally, the perceptions of parents, educational practitioners and community leaders are sought on the utility of girls' education and gender equality.

HARYANA is one of the smaller, but relatively prosperous, states of India. The State lies in the north-western plains of the country, has an area of 44,212 sq kms and a

population of 16.5 million—8.83 million male and 7.64 million female. The historically disadvantaged Scheduled Castes, who enjoy a special protective

discrimination status under the Constitution of India, account for nearly 20 per cent of the State's population. The State had made substantial progress in agriculture and industry and has well developed systems of roads, electricity, telecommunication and irrigation. The human resource development sectors like education, health and employment show serious gender gaps and lack of water and sanitation within and around dwellings, eternal search for fuel and livestock care are the problematique for women. There are a million fewer females in the population; the sex ratio (number of women per thousand men) is a low of 865 and is declining more markedly in the 0-6 years (pre-primary age group) on account of decimation of female foetuses and infants. Female life is poorly valued and the status of women is low to say the least.

Female literacy for the State as a whole is 41 per cent compared to 69 per cent for men (1991 Census). Seven out of the sixteen districts have female literacy lower than the national average of 40 per cent. Rural female literacy is below 30 per cent in six districts. The District Primary Education Programme (DPEP) has been launched in the four lowest female literacy districts of the State viz., Kaithal (28 per cent), Jind (30 per cent), Hissar (32 per cent) and Sirsa (34 per cent). These districts have low population density and fare poorly on most social development indicators.

Purpose of the Study

Gender studies were commissioned (1) for providing inputs in gender sensitive plan formulation, and (2) for intervention into the content and process of education with a view to promoting girls' education and women's empowerment.

Methodology

The study was based on information blanks, interview schedules and field observation. The study was carried out in participatory research mode. In the present study, provision of schooling was employed as a stratificatory variable; the population size and level of educational facilities were found to be positively related. A total of 999 households were included in the sample from 32 villages and eight urban slums selected for the study. In all, 256 dropout girls and 220 never enrolled girls from these households were personally interviewed. In addition, 117 primary teachers, 76 head teachers and educational administrators and 160 community leaders in all were interviewed. Forty group discussions comprising a cross-section from the community including women were conducted.

Summary of Findings

1. Mapping out gender disparities in access, enrolment, retention
 - Every child in Haryana is served with a primary school within 1.24 km as on 30.9.93.
 - There are a total of 8207 government primary schools/sections, in addition there are recognized and unrecognized primary schools.
 - To achieve the objective of universal enrolment, massive enrolment drives are launched every year, involving teachers and the community.
 - The gross enrolment ratio (GER) for girls was 107 compared to 115 for boys of all groups. The GER for SC girls was 118 compared to 123 for SC boys.

- A number of incentive schemes have been launched to attract, enroll and also to retain children particularly girls, and those belonging to the Scheduled Castes/Tribes. This accounts for relatively higher GER among SC children which gets nullified by higher drop-out rates.
 - Gender disparities have reduced considerably but caste disparities persist. In 1993-94 (as reported in the Ministers of Education Conference, March 3-4, 1995), the drop out rates in Haryana have come down to less than 20 per cent for boys and 22 per cent for girls of all groups at the primary stage. The drop out rate for SC boys is 31 per cent and for SC girls 33 per cent
2. Identifying causes for non-enrolment and drop out of girls and propose effective district/local specific strategies to improve enrolment, retention and achievement among girls.
- 2.1 In all 999 household were surveyed in the four sample districts under the DPEP Gender Studies Projects—262 (26 per cent) sample households of Scheduled Caste communities and 343 (34 per cent) of other backward classes. Only households with girl children were included in the sample.
- A total of 5442 persons were staying in the sample households comprising 2646 males and 2796 females. Of these 549 were children in the age group 0-5 years There were 1189 children in the age group 6-10 years of whom 685 were girls and 918 children in the age group 11-14 years, of whom 605 were girls.
 - Fifty-five per cent households had access to well water, 20 per cent to tubewells and 20 per cent to tap water
 - About 34 per cent families had to fetch water from a distance of one kilometre, a task done by girls and women.
 - Firewood (66 per cent) and cow dung cakes (23 per cent) were the main fuel in the sample households.
 - Fifty-three per cent females of the sample population were illiterate as compared to 39 per cent males in the age group 64
 - Sixty-one per cent females of the sample population were non-workers.
 - Out of a total 1290 girls in the age group 6-14 years, 525 (41 per cent) were attending school, whereas 252 (20 per cent) were drop outs and 458 (36 per cent) were never enrolled.
 - Close to 49 per cent drop out girls belonged to general families, 29 per cent to Scheduled Caste and 22 per cent to other backward and minority groups
 - Ninety-two per cent mothers of the drop out girls were found to be illiterate as compared to 70 per cent fathers.
 - Sixty-eight per cent drop out girls were found to be either first or second born children of the family.
 - Sixty per cent drop out girls belonged to families who were earning less than Rs.20,000 a year.

- About 43 per cent never enrolled girls belonged to Scheduled Caste families. There were, however, 41 per cent never-enrolled girls from non-Scheduled Caste families also.
- Close to 39 per cent never-enrolled girls were first-born.
- Sixty per cent never-enrolled girls belonged to families with five to six members.
- Parents had higher educational aspirations for sons in all districts. Higher education is visualized for girls by about 18 per cent parents compared to 32 per cent parents for boys.
- Close to 16 per cent parents wanted to see their daughters as teachers. Ten per cent parents wanted to see their daughters as police officers, an occupation finding new acceptance.
- Thirty-two per cent parents showed their preference for literacy programmes for girls and women; 38 per cent for income generating schemes and 32 per cent parents wanted programmes on health and nutrition.

2.2 In all, 256 drop out girls were interviewed personally.

- Sixty-seven per cent drop out girls were found to be in the age group 12-15 years in the sample households. Due to strong governmental efforts, drop out rate is negligible (four per cent) in the age group 6-8 years.
- Sixty-eight per cent drop out girls wanted to resume their studies.
- According to drop out girls, 54 per cent parents were in favour of

their daughters resuming their studies, if given a chance.

- Eighty-seven per cent drop out girls had liked the school and their teachers.
- Drop out girls generally did domestic work, sibling care, helped parents in occupation and were engaged in remunerative employment.

2.3 In all, 220 never-enrolled girls were interviewed personally.

- Forty-two per cent never-enrolled girls were found in the age group 12-15 years which requires out-of-school system of education.
- Seventy-six per cent of the total never-enrolled girls showed their desire to attend school given a chance.
- According to never-enrolled girls 30 per cent parents were in favour of their daughters getting enrolled now.
- About 44 per cent never-enrolled girls knew how to count.
- About 50 per cent never-enrolled girls expressed the need for literacy programmes in their villages.
- Generally, never-enrolled girls were found to be busy in wage earning activities, sibling care, fetching water, domestic work and also care of livestock.
- About 88 per cent never-enrolled girls felt parents discriminated between daughters and sons in provision of clothes, 83 per cent felt discriminated against in food, 40 per cent in toys, 37 per cent in rituals and social visits, and 36 per cent in opportunities for play.

2.4 Reasons for Continuance of Girls in School

<i>Parents</i>	<i>Educational Practitioners</i>
Ability of parents to provide extra tuition cost (57%)	Parental motivation (88%)
Better economic standing of the household (56%)	Parental education (85%)
Parental motivation (46%)	Self motivation of the girl child (72%)
Parental education (43%)	Better economic standing of the household (70%)
Self motivation of the girl child (38%)	Ability of parents to provide extra tuition cost (56%)
Ability of parents to provide adequate food and clothing (36%)	Ability of parents to provide books and stationery (55%)
Positive attitude of teachers (36%)	Ability of parents to provide food and clothing (44%)
Parental ability to provide books and stationery (35%)	Ability to provide academic support (themselves or paid) (44%)
To provide academic support (themselves/paid) (33%)	Helping in creating time and space for studies at home (32%)
Creating time and space for studies at home (30%)	

Interviews with parents and educational practitioners show variance in perceptions as regards the reasons for continuance. Parents put premium on economic factors followed by parental motivation and parental education, the practitioners give reverse weightage. However, group discussions bring out that

School factors like positive attitude of teachers, posting women teachers, incentives, also attract children in school, separate school for girls and availability of middle school nearby do matter in

addition to *household factors* like parental education, awareness about the utility of girls' education and, of course economic capacity.

Poverty driven household factors like domestic work, sibling care, parental inability to bear extra tuition costs, parental illiteracy and lack of motivation, helping parents in their occupation appear to be predominant in causing drop out among girls. Early marriage and social taboos at onset of puberty, are other constraining factors. Educational practitioners see lack of support services

2.5 Reasons for Girls Dropping Out of School

<i>Parents</i>	<i>Teachers/Educational Practitioners</i>
<i>School Factors</i>	
School far away (14%)	School far away (63%)
No women teachers (8%)	Unattractive school environment (51%)
Failure (7%)	Unsuitable school timings (32%)
Lack of relevance of school curriculum (5%)	Lack of relevance of school curriculum (30%)
Lack of separate school (4%)	No women teachers (21%)
Unattractive school environment (4%)	Teachers' negative attitude (19%)
Teachers' negative attitude (2%)	Lack of separate school for girls (17%)
Unsuitable school timings (1%)	Failure (13%)
<i>Household Factors</i>	
Domestic work (80%)	Care of siblings (85%)
Poverty leading to inability of parents to provide clothes and shoes (55%)	Domestic work (70%)
Inability of parents to provide books (55%)	Lack of parental motivation (62%)
Lack of parental motivation (54%)	Parental illiteracy (60%)
Inability of parents to provide stationery (52%)	Helping parents in occupation (59%)
Care of siblings (49%)	Lack of academic support from parents/other family members (45%)
Helping parents in occupation (48%)	Engagement in remunerative employment (44%)
Inability of parents to pay extra tuition cost (46%)	Inability of parents to provide books (42%)
Inability of parents to provide food (27%)	Inability of parents to provide clothes and shoes (40%)
<i>Community Factors</i>	
Early marriage (24%)	Lack of support services viz. anganwadis, balwadis and creches (56%)
Social taboos such as onset of puberty (16%)	Social taboos such as onset of puberty (43%)
Lack of support services viz. anganwadis, balwadis and creches (13%)	Early marriage (38%)

for child care as a major hindrance for girls attending school. School factors are seen as constraints more by the educational practitioners themselves compared to

parents who emphasize economic aspects more.

School factors like lack of incentives and untimely distribution of incentives;

2.6 Reasons for Non-enrolment of Girls in School

<i>Parents</i>	<i>Teachers/Educational Practitioners</i>
<i>School Factors</i>	
No women teachers (16%)	Non-availability of school/NFE centres close to habitation (65%)
Lack of separate school for girls (14%)	Lack of separate school for girls (24%)
Unsuitable school timings (8%)	Unsuitable school timings (21%)
Non-availability of school/NFE Centres close to habitation (8%)	No women teachers (7%)
<i>Household Factors</i>	
Domestic work (75%)	Care of siblings (92%)
Parental illiteracy (67%)	Lack of parental motivation (70%)
Lack of parental motivation (62%)	Engagement in remunerative employment (65%)
Inability of parents to pay extra tuition cost (57%)	Parental illiteracy (51%)
Inability of parents to provide clothes and shoes (53%)	Domestic work (45%)
Inability of parents to provide books (53%)	Inability of parents to pay extra tuition cost (40%)
Inability of parents to provide stationery (51%)	Inability of parents to provide food (38%)
Helping parents in occupation (44%)	Inability of parents to provide clothes and shoes (36%)
Inability of parents to provide food (30%)	Helping parents in occupation (35%)
<i>Community Factors</i>	
Cultural factors such as social taboos on onset of puberty and early marriage (14%)	Cultural factors such as social taboos on onset of puberty and early marriage (34%)
Lack of support services, viz. anganwadis, balwadis and creches (7%)	Lack of support services, viz. anganwadi, balwadis and creches (22%)

lack of separate school for girls, no woman teacher in the school, no remedial coaching for girls, lack of physical facilities like separate toilets for girls, boundary walls, etc., absence of noon-meal scheme, and unsuitable school timings during sowing/harvesting seasons do cause drop out among girls

Household factors, primarily poverty leading to inability of parents to pay extra tuition fee/funds, buy books, stationery, clothes and shoes, sibling care, engagement in economic/occupational activities of adults and in remunerative employment, and lack of academic support for first generation learners at home are seen as hindering girls' regular attendance

and retention Early marriage, purdah, and lack of awareness about utility of educating girls surfaced sharply during discussions

As regards non-enrolment also, household factors predominate and school factors are less emphasized Practitioners see non-availability of school/NFE centres as a major constraint, followed by lack of separate schools and unsuitable school timings, lack of child care facilities and cultural factors like early marriage and puberty. Parents emphasize economic reasons Group discussions likewise brought out the salience of household factor and cultural impediments and requirements

2.7 Perceptions on Utility of Girls' Education

<i>Parents</i>	<i>Teachers/Educational Practitioners</i>
Develops positive self image and confidence among girls (72%)	Makes girls and women aware of their rights (97%)
Prepares girls for economic contribution (67%)	Prepares girls for participation in decision making process in all walks of life (97%)
Ensures education of future generation (63%)	Helps raise age at marriage and reduce maternal, infant and child mortality (97%)
Can improve health and nutritional status of children (60%)	Prepares girls for leadership role in society (96%)
Prepares girls for leadership role in society (50%)	Helps in reducing the family size (96%)
Helps raise age at marriage and reduce maternal, infant and child mortality (48%)	Develops positive self image and confidence among girls (85%)
Will make girls and women aware of their rights (41%)	Can improve health and nutritional status of children (77%)
Helps in reducing the family size (40%)	Ensures education of future generation (76%)
Prepares girls for participation in decision making process in all walks of life (28%)	Prepares girls for economic contribution (76%)

As is evident from the above, both groups see the usefulness of girls' education. The former, the parents, though not being educated themselves have somewhat different perceptions from the educated group of teachers and administrators.

Group discussions show one thing very clearly—that parents and other

community members now want girls to be educated. It was a refreshing change from yester-years when education was seen as having a negative impact on girls. They all tend to see a definite relationship between education, earning and self worth. It is primarily their pecuniary circumstances that are the chief hindrance

2.8 Perceptions about Gender Equality

<i>Parents</i>	<i>Teachers/Educational Practitioners</i>
Both need to be given equal amount of food (79%)	Husband and wife should take all decisions jointly (95%)
Both need to be given equal health care and medical attention when needed (78%)	Men and women should be paid equal wages for equal work (94%)
Both need to be given equal time to play (75%)	Both need to be given equal health care and medical attention when needed (91%)
Girls and boys need equal education (70%)	Both have same intelligence and abilities (90%)
Both can perform all tasks equally well (59%)	Both can have similar occupation (90%)
Both should be given the same freedom (58%)	Both should be given equal time to play (87%)
Both can be assigned same duties/responsibilities (57%)	Household work must be shared by all members of the household (86%)
Men and women should be paid equal wages for equal work (56%)	Both can perform all tasks equally well (85%)
Both have same intelligence and abilities (55%)	Both need to be given equal amount of food (84%)
Both can have similar occupations (48%)	Both can be assigned same duties/responsibilities (77%)
Husband and wife should take all decisions jointly (46%)	Both should be given the same freedom (75%)
Assets of the family should be registered in joint names of husband and wife (44%)	Girls and boys need equal education (71%)
Household work must be shared by all members of the household (42%)	Assets of the family should be registered in joint names of husband and wife (66%)

Again, teachers and administrators give very egalitarian responses on the thirteen positive statements on gender equality compared to the parents. It is, however, interesting to note that equal treatment of boys and girls is agreed upon for education, food, health care and medical attention. The parent group appears to have lesser confidence in the equal ability—equal responsibility—same occupation—equal performance by girls and would not like to give equal freedom to boys and girls. Equality in wages and adult roles in decision making are also not subscribed to by parents very strongly. Lowest acceptance is of shared roles in household work and joint ownership of assets.

2.9 Suggestions of Parents and Educational Practitioners

—Enhancing enrolment

Parents : Changing school timings, availability of NFE centre, more Anganwadi centres, free noon-meal, posting of women teachers.

Educational Practitioners : Attendance scholarship to all, timely distribution of incentives, programme to motivate the parents, incentives to all and free noon meal, and forceful implementation of educational law for compulsory primary education.

—Enhancing retention

Parents : Free stationery, free uniform, separate school for girls, free noon meal, no extra tuition cost, and free books.

Educational Practitioners : Curricula relevant to local needs, introduce art and craft courses,

monthly parent-teachers association meetings; demand for senior separate school for girls, arrange picnics for students; creches should be opened, play-way method should be used.

—Enhancing achievement

Parents : Recruitment of local teacher

Educational Practitioners :

Remedial coaching exclusively for girls

3. Assess the situation of women in each district with regard to some social and demographic indicators and women's equality and empowerment.

—Gender discrimination can be seen at its worst in Haryana where the right to be born is being denied to a female with sex selective abortions in flagrant violation of all rules and norms. Dowry and share in property are the main cause of this heinous crime. Once born, female life is at the greatest risk in the first year and during early childhood when female children face gross neglect and discrimination in provision of food and nutrition and medical aid in the instance of disease. Domestic violence in the form of wife beating is rampant. As regards education, parents now do realize the importance of educating girls but express higher educational and occupational aspirations for sons, according to studies. Drop out and never enrolled girls, when interviewed, perceived that their parents do discriminate against

them in food, clothes, books, play and even family outings compared to their brothers.

- Haryana's prosperity has further aggravated the sad plight of women and girls who, regardless of the economic status of the household, are continuously involved in domestic work, including livestock care and providing support in cultivation of cash crops. The field data shows that parents appeared to favour equal food, equal health and medical attention for their children by and large. Half of the parents agree to giving equal freedom to boys and girls and three-fourths would give equal time to both to play. About half the parents agreed that both have the same intelligence and abilities and can have similar occupations

- 4 To collect information on gender bias in (i) textbook, (ii) teacher training, (iii) teacher attitude, (iv) transaction and (v) administrator attitudes.

—Review of Hindi and Mathematics textbooks has been completed for Haryana.

5. To identify supportive community structures such as women groups, VECs, Panchayats, PTAs, Teachers Organisations, Youth Clubs for developing effective strategies of UPE among girls

—The community leaders, especially Panch and Sarpanch, take keen interest in providing school rooms

but expect the State Government to maintain these buildings. The State should take some steps in this regard.

- Mahila Mandals exist but are not functioning properly due to lack of funds
- With the recent constitutional amendments (73 & 74), all development subjects including school education are now to be handled by the three tier local bodies in the rural areas (Gram Panchayat, Block Samiti and Zilla Parishad) and by the Municipal Committees/Corporations in Urban areas. Village Education Committees are being formed for UPE.

6. Identifying ways to facilitate convergence of services of different departments for UPE among girls (ECCE, Health and Support Services).

—At the moment there is no coordination between the Anganwadis and the school

—The respondents proposed that the timings and proximity of Anganwadis (Integrated Child Development Service Centres) to schools must be coordinated. They also felt that the non-formal education centres for girls be opened next to the Anganwadis with simultaneous timings.

—Field studies also show that the State of Haryana has a fair amount of coverage of villages with Anganwadis (Integrate Child Development Service Centres). Yet, effectively, only a third of the

children in the age group 0-6 years are covered by these centres. These centres are run only for a period of three hours. Hence, these do not solve the problem of sibling care

7. Study the availability of educational (books, stationery, uniforms, scholarships) and other incentives like noon meals, attendance prizes, attendance scholarship, etc

- Incentives like free textbook, stationery, attendance prizes are being given to Scheduled Caste girls. This has had a visible impact on enrolment of Scheduled Caste girls at the primary stage. In addition, the children of nomadic tribes get an allowance of Rs. 1 per school day and denotified tribes children get attendance scholarship of Rs. 10 per month for 70 per cent attendance
- Maximum number of respondents (parents, teachers, educational administrators and community leaders) have recommended that the aforesaid incentives should be given to all girls irrespective of caste and creed
- Field work shows that two-parent-working families (mostly landless, daily wage earners) are not able to provide tiffin to their children both on account of lack of money and time, so free noon meal scheme was strongly recommended by parents and teachers

8. To assess participation of women in

teaching, administration and other decision making bodies

- In all, 59 per cent of the total interviewed teachers were females. However, 42 per cent sample teachers commute from more than 15 kms. Only 5 per cent stay close to school

- It was found that there were very few women teachers in remote areas. Without fail, all discussions pointed to the need for at least one woman teacher in every primary school. Parents were reluctant to send their daughters to single (male) teacher schools as they felt that their daughters were not safe, especially if the teacher was absent

- Out of 76 interviewed administrators/institutional heads, 32 were females. Seventy per cent of these administrators/heads commute more than 10 kms either by bus or by cycle.

- Haryana is consciously trying to give women equal participation in education. In fact, according to the latest policy guidelines, there is an attempt on the part of the State Government to recruit women teachers at the primary stage on 60 : 40 basis instead of the existing policy of 40 : 60

9. To develop state/district level monitoring and evaluation framework

- To be done under Management Information System (MIS). As soon as all data is analyzed, indicators for monitoring girls' education and women empowerment shall be developed

SUGGESTED INTERVENTIONS

Haryana

<i>Existing Strategies</i>	<i>Proposed Strategies</i>
(i) Providing schooling facilities within 1.29 km to every child and provision of Junior Part Schools. Primary schools exclusively for girls are being opened.	(i) Access is not the basic problem at the primary level. But provision for Middle and High school education should be made for all villages through formal/non-formal/distance education
(ii) To achieve the objective of universal enrolment, the State has carried out massive enrolment drives involving the school teachers and the community	(ii) Girls should be allowed to bring their younger brothers and sisters alongwith them to the school
(iii) Various incentive schemes like free books, uniform, attendance scholarships, etc, are being implemented by the State Government to enrol and retain girls and children of disadvantaged groups.	(iii) Early Child Care Education (ECCE) centres should be opened within or close to the school. Working hours of the ECCE centres should be the same as the school timings
(iv) Quality improvement schemes are also being implemented in the State such as Institutional Planning, Monthly Class Tests, Inspection Plan; Strengthening School Administration, Adoption of Schools, Remedial Teaching, Inservice Teacher Education, Operation Blackboard, etc	(iv) Strengthening of the centres and opening of more centres in the villages to increase the coverage.
(v) No non-formal educational facilities are available at the moment. Distance Education was recommended for post primary education of rural girls under the UNESCO (Innovative Pilot Project). Open school has been started.	(v) Implement forcefully compulsory educational law for primary education.
	(vi) Flexible school timings according to local requirements.
	(vii) Provision of incentives to all irrespective of caste and creed. Free noon meal scheme also strongly recommended by the parents and teachers/educational practitioners
	(viii) Gender studies bring out the need to strengthen and improve the management of incentive schemes.

- (vi) Haryana has adopted many pro-women development policies and programmes. A large number of schemes aimed at improving the status of women have been launched such as Development of Woman and Child in Rural Areas (DWACRA) under Integrated Rural Development Programme (IRDP), Mahila Mandals. In order to mitigate the phenomena of female foeticide and infanticide, the State has launched a major programme titled 'Apni Beti, Apna Dhan' in which Rs 2500 is deposited for a period of 18 years in the name of new born girl child. This amount would be given to the girl provided she is not married off before eighteen. Education is free for girls at all levels.
- (vii) Enough material has been developed from the view point of removal of gender bias from textbooks under the UNESCO Innovative Pilot Project of NCERT Orientation Programmes for gender sensitization for teachers, teacher educators and administrators were organized by the Department of Women's Studies, NCERT, in collaboration with the State authorities, 441 educational personnel including 192 educational administrators and teacher educators and 232 primary teachers have already been oriented.
- (viii) Materials for advocacy campaign is being prepared under the above UNESCO Innovative Pilot Project for awareness generation among parents in 15 villages of three Blocks, one each in Districts Gurgaon, Faridabad and Kaithal.
- (ix) According to the policy guidelines,
- (ix) Posting of at least one woman teacher in every school.
- (x) Opening of middle schools nearby exclusively for girls.
- (xi) Studies (DPEP — Baseline) show that achievement level among girls is low. Remedial coaching should be provided to minimize the drop out rate.
- (xii) Centres for Non-Formal Education are proposed (under DPEP) for non-enrolled and drop out children.
- (xiii) Need for Advocacy Campaigns for parents about the utility of girls' education.
- (xiv) Inter-departmental coordination should be established in timings and functioning of centres.
- (xv) Establishing coordination with other departments for sanitation, water and fuel to ease out the situation of school age girls. During field visits, it was observed that in spite of government supply of drinking water in the villages, scarcity of water exists. Girls and women had to fetch water from a distance of one km and more. Households had no toilet facilities in their houses. Women and girls try to go to open fields before or after sunrise to avoid embarrassment.
- (xvi) Need for strengthening Mahila Mandals by providing them enough financial assistance to function properly and proper orientation.
- (xvii) Energizing Mahila Mandals to work for girls' education and women's development.

there is a provision to recruit women teachers at the primary stage on 60:40 basis and 50:50 in administration.

- (x) Women in Panchayats also exist as a part of policy framework.

(xviii) NGO's should be encouraged and developed to take up programmes for women's development. Multi-media campaigns should be carried out for changing the social attitudes for ending practices derogatory to the status of women such as dowry, early marriage, female foeticide and infanticide

(xix) Training by NGO's and other agencies working on women's issues for Village Education Committees on gender sensitization.

(xx) Increased livestock care has forced women to shoulder extra responsibilities. The number of milch animals has increased tremendously causing more strain on women's health. The State can be requested to provide bio-gas generation facilities which will relieve girls and women from spending time on making cow-dung cakes and will also reduce the pollution hazard in the kitchen. School-age girls were doing this work extensively

(xxi) The materials generated under the UIPP can be used for orientation programmes in pre-service and in-service teacher training for teacher educators and educational administrators.

(xxii) Need to develop handbooks for parents, Village Education Committees (under DPEP) and Panchayats to be used for gender sensitization programmes

(xxiii) State can be requested to disseminate and use gender sensitization materials for other DPEP districts.

(xxiv) Recruit more local women/men teachers at the primary stage or provide residential facilities for non-local teachers as an alternative

(xxv) State can be requested to strengthen the training to energize women panches and sarpanches to act as important agents of change, in bringing the change in the perceptions of parents and community with regard to utility of girls' education and women's equality

There is need for compilation of gender disaggregated data on quality indicators such as enrolment, retention, achievement, completion rate, proportion of women in teaching and educational administration.

Against the bench mark data, periodic monitoring can be done keeping in view the proposed quantitative and qualitative targets.

The more difficult task is that of monitoring the content and process of education from the point of view of equality between the sexes. The impact of revised textbooks and proposed gender sensitization of teachers, teacher educators, administrators, community leaders, VECs and Panchayat members, Mahila Mandals and parents would be felt at the end of the project period. Continuous monitoring of the content and transaction of gender sensitization

programmes and awareness generation campaigns would be required

Canvassing of the Utility of Girls' Education and Gender Equality schedules and holding of group discussions periodically with parents, teachers, administrators and community leaders would give us an assessment as to whether there are positive attitudinal changes for supporting gender equality and women's empowerment. Effectively, we should be monitoring not only quantitative achievements but the process of education in terms of classroom interaction, observation of teacher behaviour, school climate, etc.

Studies should be inbuilt into the planning process to assist in monitoring and evaluation of programme processes in relation to objectives and defined targets

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Universalizing Primary Education among Girls in Some Educationally Backward Districts of Tamil Nadu

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New Delhi

Gender studies were conducted in three districts, namely South Arcot, Thiruvannamalai Sambuvarayar, Dharmapuri of Tamil Nadu as a part of the District Primary Education Programme. All the districts selected were educationally and economically backward having low female literacy rates as compared to the State and National average. In each district, one DPEP block, eight villages and two urban locations were selected to identify the causes of continuance, drop out, non-enrolment of girls in schools as well as to know the perceptions of parents, educational practitioners and community members regarding the utility of girls' education and gender equality. Majority of the respondents agreed with the utility of girls' education. However, they did not agree with most of the gender equality parameters.

TAMIL NADU is one the educationally advanced States with a literacy rate of 62.66 (1991 Census). Male literacy rate is 73.75 and female literacy rate 51.33 which is higher than the national average. Enrolment ratio for Classes 1 to V is 149.0 for boys and 140.8 for girls (1993-94); for

Classes VI to VIII enrolment ratio is 111.3 for boys and 91.0 for girls (1993-94 figures). It is also among the top four most advanced States in primary education measured in terms of facilities, quantity and quality. However, some districts are still educationally backward in which

This paper is based on District and State reports of DPEP Gender Studies, Tamil Nadu.

educational status of girls/women is very low. Three low female literacy districts, namely, South Arcot, Thiruvannamalai, Sambuvarayar and Dharmapuri were selected to conduct a gender based study as a part of the District Primary Education Programme (DPEP) mainly to identify the causes of non-enrolment and drop out among girls and to assess the situation of girls and women regarding equality and empowerment.

Objectives

1. Mapping out gender disparities in access, enrolment and retention in three DPEP Districts of Tamil Nadu.
2. Identifying causes for non-enrolment and drop out of girls.
3. Assessing the situation of women in each district with regard to some social and demographic indicators and women's equality and empowerment.
4. Collecting information on gender bias in (i) textbooks, (ii) teacher training, (iii) teachers' attitude, and (iv) administrators' attitude.
5. Identifying supportive community structures such as women's groups, VECs, Panchayats, PTAs for developing effective strategies of UPE among girls.
6. Studying the availability of various incentive schemes like textbooks, stationery, uniforms, noon meals, etc.
7. Assessing participation of women in teaching, educational administration and other decision making bodies.

Methodology

The study was primarily qualitative and carried out in participatory research mode. Structured individual interviews,

case studies and group discussions were carried out in addition to secondary data obtained from several sources.

The Sample

In all, 1015 households (only those households were selected which had girl/ girls) were visited in 24 villages and four urban slums in three blocks, one each in South Arcot, Thiruvannamalai and Dharmapuri. A total of 120 drop out girls, 76 never-enrolled girls, 82 primary teachers, 22 institutional heads, 28 community leaders and nine educational administrators were interviewed. In all, 28 group discussions, one each in a sample village/urban slum, were conducted in which 297 persons (male and female) actively participated. Fifty-three case studies of drop out/never-enrolled girls were also carried out.

The villages were selected on the basis of the following criteria.

1. Schoolless village/village having single teacher school
2. Village having a primary school
3. Village having a middle school
4. Village having secondary or higher secondary school.

Tools

1. Interview Schedules

The data were collected through several structured schedules, namely (i) District Schedule, (ii) Village/Urban/Slum Schedule, (iii) Household Schedule, (iv) Drop Out Girl Schedule, (v) Never-Enrolled Girl Schedule, (vi) Teacher Schedule, (vii) Institutional Schedule, (viii) Community Leader Schedule, and (ix) Educational Administrator Schedule.

The structured Interview Schedules

were tried out in one village and then modified

2. Case Studies

Some drop out and non-enrolled girls were selected out of the sample population from each village/slum area to conduct case studies

3. Group Discussions

Every group was a small mixed group representing men/women, people of different castes living in a particular village/slum. The group members interacted freely and shared their views with the researchers regarding girls' education, women's empowerment, social customs, social evils and child-rearing practices. Every discussion was recorded by the researchers. Observations and recording of field experiences formed an important part of the study.

Data Analysis

The data (quantitative and qualitative) was collected, scrutinized and checked thoroughly for all the districts selected under study. Quantitative data was computerized and qualitative data was analyzed manually.

The data was analyzed districtwise. State level data was calculated by combining districtwise data (District reports are available with the State and DWS, NCERT).

Descriptive statistics (percentages) was used to interpret the results

Major Findings

Access

Tamil Nadu has achieved the goal of universal provision of primary schools.

There are primary schools in all habitations with a population of 500 and above and 82 per cent of habitations with a population of 500-999 have primary schools, and 97 per cent are within one kilometre distance. However, some habitations (with a population of 300 and above) are still schoolless. Children of migrant workers and other nomads suffer lack of access to school. There are 119 habitations (with a population of 300 and above) in South Arcot District which do not have a primary school. In Thiruvannamalai, 42 habitations are schoolless and in Dharmapuri District 14 habitations do have a primary school or non-formal centre.

Most of the primary and upper primary schools lack drinking water facilities.

Toilet facilities are required in 39 per cent primary schools in South Arcot, in 99 per cent primary schools in Thiruvannamalai and in 98 per cent primary schools in Dharmapuri. Most of the schools do not have separate toilets for girls.

NFE schemes have very limited coverage, with at most 200 centres having 25 children each.

Enrolment at Primary Level

The Gross Enrolment Ratio (GER) at the primary level of both boys and girls is below the State average in all three districts selected for the study. The GER of girls is lower than that of boys in all the districts, especially in Dharmapuri.

Drop Out

The drop out rate at the primary level has declined steadily. However, the drop out rate of girls is considerably higher (24.0) than the boys (19.16) with SC/ST girls

having the highest drop out rate. Further, drop out rates were found alarmingly high in Urdu medium schools in Dharmapuri.

Household Scenario

Majority of the sample households (nearly 40 per cent) belonged to most backward communities followed by backward communities (28 per cent) and Scheduled Castes (27 per cent). Only 1.5 per cent households belonged to Scheduled Tribes. Ninety three per cent of the sample households were Hindus.

There is scarcity of drinking water in some sample villages/slums, e.g. in Aythapalayam, Sathanur and Dr. Ambedkar Nagar (slum) of Thiruvannamalai district and in Pillur, Pidadam, Nannadu, Sundaripalayam and Kilianur Voikel (slum) of South Arcot District.

Ninety-nine per cent households were using wood as the main source of fuel which is generally collected by girls/women.

Ninety-nine per cent of the sample households had poor drainage.

Nearly 22 per cent male population and 30 per cent female population was illiterate. The majority of women (30 per cent) were educated below primary level.

Nearly 54 per cent male and 82 per cent female population were non-workers. Maximum workers were in the agricultural labourer category.

Educational aspirations of parents for boys were slightly higher than that for girls. Preference for sons' education was upto graduation (34 per cent) whereas for girls, higher secondary and secondary were seen as the desirable level by majority of the parents (38 per cent and 23 per cent respectively).

Thirty-eight per cent parents aspired for their sons to be in government services, 27 per cent in the teaching profession and 13 per cent in the police. Whereas for their daughters they preferred teaching (33 per cent), housewife (23 per cent) and nursing (17 per cent) which are all female stereotyped.

Ninety-seven per cent parents preferred income generating programmes in the village followed by literacy programmes (81 per cent) for out-of-school girls and women.

Drop Out Girls

Seventy-three per cent drop out girls were in the age group of 12-15 years. It may be inferred that drop out rate is declining in the age group 6-11 years due to several measures.

More than 50 per cent of the sampled drop out girls were interested in resuming their schooling.

Eight-two per cent drop out girls stated that their parents were not interested in sending them to school.

Majority of the drop out girls liked their school and their teachers.

Tamil was the most liked subject (83 per cent) by drop out girls followed by social science.

English was the most disliked subject (72 per cent) followed by Telugu (66 per cent) and mathematics (64 per cent).

All drop out girls expressed the feeling that they were discriminated against by their parents. Maximum discrimination was felt regarding participation in rituals and social visits (69 per cent) and opportunities for play (60 per cent).

Never-enrolled Girls

Fifty-nine per cent of the sampled never-

enrolled girls were interested in going to school if the opportunity was given. Parents of 17 per cent never-enrolled girls were also interested in sending them to school.

Reading and writing abilities of sampled never-enrolled girls were very poor as only 13 per cent girls were able to read and write.

Sixty-seven per cent girls were able to count upto 10 only

Fifty-seven per cent never-enrolled girls wanted literacy programmes. Eighty-eight per cent wanted income generating programmes and thirty-three per cent demanded health and nutrition programmes in the villages

Perceptions on Reasons for Continuance of Girls' Schooling

Perceptions were taken from parents of sampled households, educational practitioners (teachers and educational administrators) and community members. Better socio-economic condition of the household, parental education, academic support, provision of various incentives for school-going children and positive attitude of teachers emerged as main reasons for continuance of girls' schooling.

Perceptions on Reasons for Non-Enrolment of Girls in School

Perceptions were taken from sampled parents, educational practitioners and never-enrolled girls as well as common villagers. Household factors were found dominating among the reasons for non-enrolment of girls in schools. The main factors include engagement of girls in domestic work, girls helping their parents in occupation, care of siblings, lack of parental motivation for girls' education,

parental illiteracy and engagement of girls in remunerative employment

Perceptions on Reasons for Girls Dropping Out from School

Perceptions of sampled parents, educational practitioners, sampled drop out girls and community members who participated in group discussions were taken regarding reasons for girls dropping out from school.

It was found that household as well as community and some school related factors were contributing towards dropping out of girls from school. The main household factors include girls helping parents in occupation, involvement of girls in domestic work engagement of girls in remunerative employment and lack of parental motivation.

Main school factors were failure of drop out girls and lack of separate schools for girls

Social taboo on onset of puberty and early marriage emerged as the main community related factors responsible for dropping out of girls from school

Perception on Reasons regarding Utility of Girls' Education

Perceptions of parents, educational practitioners and community leaders were recorded on structured interview schedules regarding utility of girls' education. This issue was thoroughly discussed in group discussions with community members also.

Most of the respondents strongly agreed that education of girls was useful in several ways, e.g. education prepared girls for economic contribution in the household; it would ensure education and well-being of future generations besides

developing in them more self-confidence and a positive self image, leadership qualities, would make them aware of their rights and prepared them for participation in decision-making process in the family and society

Perceptions on Gender Equality

As a result of interviews/interaction with parents, educational practitioners, community leaders and villagers the main perceptions regarding gender equality that emerged were as follows

- Both boys and girls need to be given equal food, health care and medical attention.
- Both boys and girls need to be educated but majority preferred higher education for boys rather than girls as they were supposed to be the bread winners of the family
- Majority preferred stereotyped jobs, e.g. teaching, nursing, housewife for girls
- Majority of the respondents were in favour of restricted freedom for girls after puberty. All community leaders demanded separate school for girls and female teachers at upper primary level (for little older girls).
- Do not want to share property with girls. Do not favour joint registration on family assets.
- Not all feel boys and girls have same abilities and intelligence or can have similar occupations.
- Not all favour women's equal share in family decision making nor equal wages.
- Sharing of house work by all members is not practised

It can be inferred that communities are

still male centric and much needs to be done to raise the status and personhood of girls and women

Status of Women

Most of the women development indicators, i.e. Sex Ratio, Total Fertility Rate, Mean Age at Marriage, Literacy Rate, Work Force Participation Rate, etc. are relatively positive in Tamil Nadu.

Parents generally do not welcome the birth of a girl child but they statedly do not discriminate between boys and girls regarding food, clothing and medical care. However, discrimination was felt and expressed by sampled drop out and never-enrolled girls.

Most of the communities place restrictions on girls after puberty.

Parents want to educate their daughters too but they aspire for more and better education for their sons as compared to their daughters. Parents do not want to share their property amongst girls/women.

The practice of female infanticide is on the increase on account of dowry and related factors in several districts.

Gender Bias in Textbooks and Teacher Training Curriculum

Primary textbooks of Tamil Nadu were evaluated in a workshop held in NIE, NCERT, New Delhi as a part of the present study. It was found that most of the textbooks were nearly gender bias free. However, in most of the pictures/themes women were shown in stereotyped roles. Only few women were shown in economically productive/professional roles.

Teacher training curriculum was also not gender sensitive

Support Services

Village Education Committees were not formed when the study was conducted. Mothers-Teachers Association (MTAs) were functioning in all the districts selected for the study. Only 12 per cent parents stated functioning of Mahila Mandals in their respective villages.

Approximately 38 per cent (14 lakhs) of the estimated 37 lakh children in the 3-5 years age group were enrolled in 22,000 per school centres for ICDS/TINP/NMP.

More than 80 per cent sampled parents confirmed the availability of anganwadi/balwadi in the village/slum. Only one anganwadi/balwadi was functioning in a village/slum. There was no coordination between the anganwadi and primary school. Eighty-two per cent parents stated the availability of health facilities nearby.

Incentive Schemes

Government of Tamil Nadu is giving several incentives to school going children, some of which are given below:

- Free education upto higher secondary
- Free noon meal
- Free textbooks
- Free uniform
- Free footwear
- Free slate to Class I pupils
- Free bus pass upto middle school; scholarships, separate residential schools for boys and girls and free notebooks are provided to SC/ST children

All school-going children were getting these incentives. Majority of the head teachers and all educational administrators stated that the incentives were inadequate and generally did not get distributed on time.

Participation of Women in Teaching and Educational Administration

At the State level, women formed 41 per cent to the total teachers at the primary level and at the upper primary level their percentage was about 48 per cent. The State Government has been reserving for women all posts of teachers teaching Classes I and II and giving preferential selection to women teachers for other classes. However, in all selected districts the percentage of women teachers to the total is less than the State average. Out of 82 sampled primary teachers 40 were females; however the head teachers of all sampled schools were male. The participation of women in educational administration at district and block levels in all districts selected under study was almost nil. The sampled teachers and administrators did very little work to improve enrolment and retention among girls.

Proposed Interventions

- Drinking water should be made available in all villages.
- There is need to switch over to non-conventional sources of energy and labour saving technologies to liberate women to participate in educational programmes and increase their willingness to send their daughters to attend school. Necessary knowledge and training has to be given to the villagers for the same.
- Small income generating schemes should be made accessible for people in every village to improve economic conditions of the rural people.
- Primary schools have to be provided in schoolless habitations with a population of 300 and above. Part

Schools or Junior Primary Schools should be opened in habitations with a population of 100 and above for children aged 5-7 years.

- Upper primary schools should be opened in a village, if it is not possible, free transport for girls has to be given for commuting
- Efforts should be made to improve the number of female teachers and women administrators in rural areas. Some incentives may be given for the same.
- Local escort system may be organized with an adult/old woman accompanying groups of girls to ensure social protection
- Teachers should be trained to identify potential drop outs such as late comers, habitual absentees, academically weak, those not in good health, those coming from illiterate homes, children of landless labourers, migrants and other poor households.
- Remedial coaching may be provided to potential drop outs.
- Adi-Dravidar and other community specific schools to be integrated with primary education system for effective administration, quality control and monitoring
- The school timings may be restructured suitably to accommodate the daily routine and demand of seasonal work during agricultural seasons.
- Mobile schools may be provided for children of migrant workers and other nomadic tribes.
- Drinking water and toilet facilities should be provided in each school. Separate toilets should be provided for girls at upper primary level. For example, in Bangladesh, the provision of proper sanitary facilities had a positive influence on community, teacher and student attitudes and improved girls' enrolment and attendance.
- NFE Centres may be opened in schoolless habitations and their coverage increased. Efforts should be made to enrol all out-of-school girls in NFE Centres. Some other local-specific alternative system may also be tried out such as BRAC schools in Bangladesh, Chili Beti in Nepal and the home schools in Pakistan.
- Quality, quantity and management of incentives has to be improved.
- Priority targeting of girls of SC/ST and other backward communities and working girls should be done
- Wide publicity should be given to legislation regarding elementary education and incentives given for the same
- Relaxed and flexible admission rules for children of migrant workers.
- Special training has to be provided to the teachers working in SC/ST predominant areas. Greater sensitivity to gender and poverty issues is needed.
- VEC/MTC has to keep track of all registered children and enforce compulsory primary education
- All children in the age group 0-6 should be covered by anganwadi/pre-school centres not only to free girls for schooling but also to prepare the younger children for later schooling. There should be proper coordination between primary school and pre-school/anganwadi/day care centres.
- Gender sensitization of anganwadi workers is required. Also, these workers need to be given inputs for improving the quality of interaction with children and women in the community.

- Girls' educational issues cannot be separated from the broader issues of the status of the girl child and women in society.
- Awareness campaigns have to be organized for parents and community to promote equality between the sexes.
- Mahila Mandals/NGOs have to be made more functional in every village to empower women for their development.
- Mass media and folk media should be used to bring attitudinal change among people regarding girls' education and women's development.
- VECs should be sensitized to work for and monitor women's education and development
- Local community leaders and religious leaders should be involved in girls'/women's development programmes.
- For promoting girls' education we have to monitor the content and process of education along with the physical facilities and quantitative achievements. The impact of revised textbooks and proposed gender sensitization of teachers, teacher educators, community leaders, VECs, Mahila Mandals and parents would be felt after some time. Continuous monitoring of the gender sensitization programmes and awareness generation campaigns would be required

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Book Reviews

Educational Planning in India, Volume 1

by
J.C AGGRAWAL
S.P AGRAWAL

Concept Publishing Company, New Delhi, 1992; Rs. 650; pp.490

THE VOLUME is a collection and compilation of reports of various committees and commissions on education, Five Year Plans, statistical tables published by the Ministry of Human Resource Development, Government of India; University Grants Commission, Controller of Publications, Government of India and Registrar General and Census Commissioner, India. The volume is divided into three sections. Section 1 contains overview and official documents, reports of Committees and Commissions, etc with sixteen headings. The first heading is 'Overview of Educational Planning in India' described in eight pages. There are 12 tables and a very brief description of the planning process. This is a very elementary procedural description and the basic philosophy and concept of Educational Planning in India is missing. Not much light is thrown on planning in the States except a one-line description "At the State level the planning and education department prepares detailed plans of educational

development in the State concerned "

The rest of the material in this section is drawn right from the reports of Post-War Plan of Educational Development, 1944, to National Policy on Education, 1986, Programme of Action and Committee to Review the National Policy on Education in a chronological order. On page 201, 'Challenge of Education' is wrongly printed as 'Challenge of Action'. This is a glaring error which could have been easily avoided. This mistake is repeated in other places also. 'Department of Education' of MHRD is misprinted 'Division of Education' on page 14, line 27. Besides printing errors there are a few spelling errors also.

The Education Commission, 1964-66 has been dealt with in 111 pages giving aspects of educational planning and educational financing. These pages, among other things, present the full text of Chapters XVIII and XIX of the Commission's report, dealing with Educational Planning and Administration and Educational Finance.

Various chapters under this section primarily deal with the financing aspects of education at different levels as suggested by different committees and commissions. Quotations from different documents are given in a sequential manner in one volume.

Section II is titled 'Five Year Plans in India. Outlays for Education'. The first part of this section gives an overview of Five Year Plans from the First Five Year Plan to the Eighth Five Year Plan describing in a few sentences in a very elementary manner each of the plans. However, this overview does not reflect the real thrust of the Five Year Plans during different periods and is very shallow in nature. The overview could have been a critical one dealing specifically with its achievements and shortcomings to make it more useful to the target group, e.g. advanced students of education and educational administration, planners and research scholars. The whole overview has been covered in two pages.

The chapters under this section provide detailed information about the different Five Year Plans. This collection of information in one volume is a good attempt both from information as well as comparison points of view. The chapters for different plans are uniformly structured under sub-titles, e.g. Introduction, Pre-School, Primary (including basic), Secondary, University, etc., which provide information for a specific stage of education.

Section III is titled 'Selected Educational Statistics and Classified Index to Tables'. Tables in this section have been compiled, adapted and reproduced primarily from the following sources.

1 Annual report of MHRD Department

of Education.

- 2 Annual report of University Grants Commission.
3. Census of India
4. Planning Commission
- 5 Publication Division, Ministry of Information and Broadcasting, Government of India.

There are 29 tables showing literacy, population, enrolment, drop out rates, institutions, teachers, plan expenditures, plan outlays, budget, cost, etc. These compiled statistical information are useful in many ways to a serious student of education and educational planning. Up-to-date and comprehensive statistical data are indispensable to the educational administrators, planners and research workers and from that point of view this is a good compilation. However, there was scope for inclusion of some of the tables on technical and vocational education as one of the thrust areas in education to solve the problem of unemployment and human resource development.

Similarly, classified index to tables is also a valuable addition to the volume for quick referencing.

While dealing with Programme of Action on page 208 of the volume it is mentioned that "Chapter XIV of the Programme of Action deals with management". Here the Chapter number is wrongly given. It is not XIV but XXIV. Chapter XIV deals with minorities' education. There are other important omissions from the Programme of Action, for example, Policies and Implication for Strategy, Priorities and Machinery for Implementation, National Level Mechanism, State Level Mechanism and Indian Education Service. For better understanding of NPE 1986 on

management the omitted aspects are very important and should have been included.

However, the editors have made a good attempt of presenting at one place the observation and recommendation of various committees and commissions on education in the post-Independence period, some important documents on education and complete texts relating to education of Five Year Plan including draft approach to the Eighth Five Year Plan. The volume is handy. This volume has achieved the goal of providing a reference guide to all those who are interested in affairs of

education in one way or the other to a great extent.

This collection of information in one volume is a good attempt and may be useful to readers both from information as well as comparison points of view especially regarding educational financing and planning. There are 29 tables on educational statistics covering financial allocation in Five Year Plans, population and density, literacy, enrolment, drop out rates, educational institutions, cost per pupil, teachers and teacher training institutions, budgets, etc.,

—C. K. MISHRA

Question Bank in Mathematics

Galgotia Publishers Pvt. Ltd., New Delhi; 1994, pp. 693

The salient features of this book are

- Introduction containing all the formulae used in solving the questions,
- Two model papers with their blue prints;
- Complete details about the design of the CBSE mathematics question paper,
- A 'Question Bank' with 600 very short-answer questions, 800 short-answer questions and 100 long-answer questions.

The question bank is divided into ten units, each unit is presented in complete detail through questions and their solutions.

In this book, the author has suggested some guidelines to the readers in order to obtain maximum benefit out of it. The two model papers in

mathematics for the CBSE examination have been designed in a systematic and planned manner. These model papers will certainly give the students a real feel of the pattern and design of the examination question paper.

Keeping in view the syllabus, the author has incorporated some challenging problems in mathematics. However, there are many typographic mistakes. Some of the questions have been found with improper use of symbols while some others are incomplete. A few of the questions have been solved by longer method. It would have been useful to present the alternative shorter method also simultaneously. Some figures are missing and some are not drawn correctly. One can excuse the printing errors as this is the first edition.

of the book but these errors need to be looked into carefully and rectified in any further edition

Typographic Errors

Q 3, page 60 : replace A by \bar{A}

Q 34, page 21 : The word system is incorrect

Q.19, page 45 : 'Line up' to be deleted

Q.58, page 189 : $1/1$ to be replaced by $1/2$

Q 57, page 188 : $\frac{dt}{dx}$ to be replaced by $\frac{dy}{dx}$

Q.63,65,66,76, page 191, 192, 196 : $\frac{d^2y}{dx^2}$ to be replaced by $\frac{d^2y}{dx^2}$

Q 31, page 95 \lim to be replaced by $x^{\lim a}$

Q 23, page 595 : $\frac{dy}{dx}$ to be replaced by $\frac{dt}{d\theta}$

Q.11, page 590 : Upper limit of the integral to be replaced by π instead of x . In addition to these there are many other mistakes which need to be corrected

Improper Use of Symbols

page (xxviii) : Replace $|a|$ by $|\vec{a}|$

page (xxxii) $\forall x$ to be replaced by $\forall x$

Q.24, page 613 : The symbol used ' $+ - +$ ' may be replaced by ' $+ - - - +$ '

Q.16, page 609 : Replace Ad by $A\vec{D}$

Q.1, page 538 : $A \wedge \bar{B}$ may be replaced by $A \cap \bar{B}$

Incomplete Questions

Q.1, page 621 : Magnitude of vector a is not found

Q.1, page 586 -do-

Q 14, page 88 -do-

Poor Explanation

Q.38, page 561 : If A, B, C , are independent events, then $\bar{A}, \bar{B}, \bar{C}$, are also independent events needs to be explained

Q.37, page 561 -do-

Q 29, page 689 : How to calculate probabilities needs explanation.

Q.11, page 86 : Formula used while solving the question needs to be mentioned

Q.30, 31,32,24,26 : Formula pertaining to breaking of limits needs to be mentioned

Q 56,57, page 108 : Change of limit not shown.

Many other such types of lapses are there in the questions

Easier Method

shown perpendicular to
each other

Q 1, page 81 . By making factors of
the numerator

Q.12, page 408 . -do-

Q 6, page 84 . -do-

Q.5, page 273 'h' is not correctly
shown in the figure.

Q 7, page 114 . -do-

Q.12, page 86 -do-

Units in the question bank are well
planned and are written in a systematic
manner. The questions in each unit are
set according to their difficulty level Each
unit is written in self-instructional form
so that students with proper attention
and interest can solve the problems easily
without any difficulty.

Figures

Q 25, page 687 . Figure is missing. It is
an ellipse

Q 3 (iv), page 77 : The axis should be

—BHARATI BATRA

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राष्ट्रीय शैक्षिक अनुसंधान और प्रशिक्षण परिषद्
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TO OUR CONTRIBUTORS

JIE invites articles/papers on the impact of educational research on classroom practices and policy decisions. Specific examples where this impact is apparent may be given

— ACADEMIC EDITOR

Are Gifted and Talented Children an Educationally Disadvantaged Group in India?

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Every country has its own share of gifted and talented students. But in a developing country like India, their needs and potentials are not being adequately met or nurtured. While there is widespread agreement that children with intellectual disability or a learning disability need special education, a similar level of consensus is absent in the case of gifted and talented students. It is timely, therefore, for the provision of educational services in India to be viewed from a different perspective. This paper reviews the attitudes towards education for the gifted and the talented, provides a brief report on the world-wide trends, and discusses the implications that it has for our country.

THE MODIFIED version of Programme of Action of the National Policy on Education—1986 (POA, 1992) states that the time has come when the Indian education system should take a new direction in the provision of education. The policy recognises the

need for providing appropriate education for all children irrespective of their caste, religion, economic status, and educational needs. The inclusion of the term "educational needs" implies that students with diverse learning needs be provided with an education that is appropriate for them. While there is widespread agreement that children with intellectual disability or a learning disability need special education, a similar level of consensus is absent in the case of gifted and talented students. It is timely, therefore, for the provision of educational services in India to be viewed from a different perspective.

Attitude towards Education for the Gifted and the Talented

Although society recognises the importance of education for the gifted and the talented, there is often an ambivalent attitude—a love-hate feeling—towards those students who are gifted or talented (Gallagher, 1985, Davis & Rimm, 1989, McLeod & Cropley, 1989). Many educators and policy makers are of the opinion that these students do not require any additional help as they are already endowed with high intelligence. As a result, resource allocation for education for the gifted and the talented is usually directed to other purposes such as special education for the intellectually disabled students (McLeod & Cropley, 1989). It is ironic that our society encourages and supports students who excel in sports or music but provides negligible support to students who are academically gifted. However, it is now evident that academically gifted students, like all other groups of students, require an education that is responsive to their unique needs. According to Urban (cited in McLeod & Cropley, 1989), while some

gifted and talented students are motivated by themselves to achieve and excel in their studies, many experience insecurity and anxiety. Research supports the fact that the latter often end up as underachievers and exhibit various psychological disturbances (McLeod & Cropley, 1989).

Though gifted and talented children constitute a minority group and are often at a great disadvantage as are intellectually or learning disabled children, they do not "enjoy" the feelings of compassion or guilt the latter group stimulates (McLeod & Cropley, 1989). Provisions for disabled students have emerged due to the pressure exerted by parents of these children and voluntary organizations interested in their welfare. However, no similar pressure groups exist to strongly advocate the cause of gifted and talented students.

According to Gallagher (1985), many schools are still caught in the dilemma of providing educational excellence while maintaining equality—both are legitimate educational goals. The prevalence of such a conflict may be more evident in developing nations than elsewhere. As stated by Colangelo and Davis (1991), egalitarianism arises because of the fear associated with the notion that society regards one section of the populace as more important or better than the remainder. To allay such fears, equity is generally preferred, but in the process, gifted and talented students are usually neglected. Colangelo and Davis (1991) also claim that anti-intellectualism is another reason for neglecting special provisions for gifted children. As a consequence, it may be argued that gifted children are a disadvantaged group because their learning needs are not being met under such a system.

The neglect of gifted children is exacerbated by the lack of teacher preparation in the area of gifted and talented education. Many teachers remain blissfully unaware of the existence of gifted and talented students in their classrooms. Whitmore, in 1983, reported that gifted education has not become an integral part of all professional preparation programmes and that the field continues to be impaired by misunderstanding, ignorance, and benign neglect. By contrast, teachers who receive some training in gifted education, are more capable of identifying gifted students, and are more supportive of them (Shore & Kaizer, 1989, Copenhagen & McIntyre, 1992).

Despite such prevalent societal attitudes, many countries have now started to realise the importance of gifted education. The demands of rapid progress, technological advancement and the interactions that result from the interplay between natural and man-made systems, have made governments and educational bodies realise that gifted children are a resource that needs to be nurtured (McLeod & Cropley, 1989). Since 1992, for example, the Council for Exceptional Children in the United States has included gifted and talented students in the category of exceptional students along with students with a disability (Pendarvis, Howley & Howley, 1990).

World-wide Trends in Education for the Gifted and the Talented

The launch of the Russian satellite, Sputnik, is often cited as the significant factor in the re-emergence of interest in education for the gifted and the talented in the United States (Colangelo & Davis, 1991; Gallagher, 1993). Though there was

a decline in the interest in the 1960s and the 1970s as issues of social justice dominated the political agendas (Colangelo & Davis, 1991), Americans continued to recognise the need for gifted people to contribute to the various facets of the nation (Gallagher, 1993). Tracing through the American history of gifted and talented education is akin to reviewing the major developments in the field because much of what we know today about gifted and talented education comes from that country. Perhaps the most important factor supporting the significant developments in the education for the gifted and the talented in the USA is that provision for gifted students is enshrined in Federal law dating from the adoption of the Marland Report in 1972 (Khatena, 1976) and its recent revision in 1993. In Canada, educational programmes and services are provided under the jurisdiction of various provincial and territorial governments (Maclean, 1976, Goguen, 1993).

Gifted and talented students in East European countries enjoy facilities such as individual courses of study following a specially designed syllabus, acceleration, avenues to attend classes at Universities or work with professional academics who undertake research (Urban & Sekowski, 1993). The Polish Children's Fund is worthy of consideration because it realises the importance of providing special educational services for both gifted and disabled children. Most of the education is provided either in a special school setting or within the regular school setting in resource rooms. By contrast, in West European and North European countries (Scandinavia, Finland, Sweden, etc.), education for the gifted was avoided due to fear of elitism. In South European

countries like Spain, Italy and Turkey an interest in this field is gradually emerging (Urban & Sekowski, 1993.) In the United Kingdom, the needs of gifted children were realised earlier and plans were introduced to meet those needs (Urban & Sekowski, 1993)

In Africa, lack of manpower resources, elitism, economic problems and civilian unrest continue to affect education for the gifted and talented. According to Taylor (1993), providing education for all African children continues to be the priority. There are indications that to a certain extent programmes for the gifted and talented are available in Ghana (Anim, 1976), Kenya (Bwibo, 1976), and Nigeria (Ajayi, 1976). South Africa remains the only African country where significant developments in gifted education are being made (Taylor, 1993) as it provides a differentiated educational system for gifted and talented students.

Braggett (1993a & 1993b) provides an extensive review on the status of the education for the gifted and the talented in Australia and New Zealand. Though cries of elitism still prevail in both countries, notable improvements in gifted education have been made. Provisions include special classes, regional consultants, centralised mentor programmes, enrichment, cluster groups and acceleration (Braggett, 1993b, Passow, 1984, Robinson, 1992). In New Zealand, however, "gifted education has to vie with the equally important and competing needs of children with disabilities in order to attract funds from a fixed resource allocation" (Braggett, 1993a, p.819) because no policy exists on education for the gifted and talented. Local schools are allowed the freedom to

provide appropriate education in that country and consequently there is a variety in the level of provision among schools.

Wide differences are known to exist in the kind of education for the gifted and the talented provided in Central and South America (DeAlencar & Blumen, 1993). Wu and Cho (1993) provide information on the current status of educational practices for the gifted and talented in Hong Kong, Indonesia, Japan, Korea, the Philippines, Singapore, Taiwan, and Thailand and Zixiu (1993) in the People's Republic of China. Curriculum enrichment, horizontal extension of instructional strategies and vertical acceleration at one school in Hong Kong, government recognition of the rights of gifted and talented students in Indonesia, after-school activities in Korea, high school programmes in the Philippines, curriculum enrichment, promotion and mentorship in Singapore; and arts, music and dance based programme in Taiwan are available in these Asian countries (Wu & Cho, 1993). In China, programmes such as early enrolment or grade-skipping, special classes, special activities within or outside the campus, and individual instruction have been made possible in the past fourteen years (Zixiu, 1993).

In Russia, the efforts of scientists led to the emergence of special science high schools for gifted students (Grigorenko & Clinkenbeard, 1994). These schools were established to nurture both scientific intellectual development and the study of foreign languages.

Where does India stand in relation to the above mentioned developments and trends all over the world? Saxena (1976) highlighted the deep concern the Indian government has in identifying and nurturing "children who have

exceptionally high level learning abilities, academic achievement and higher intellectual potentialities" (p 311) and identified various scholarships and talent search schemes in India. It is clear that the time has come for India to re-examine its policies in this important field with a view to consolidating and extending the current provisions. The country can only benefit from the appropriate development of the vast pool of intellectual potential in its children.

Who Are the Gifted and Talented ?

In order to develop appropriate policies and programmes in education for the gifted, it is necessary to define the phenomenon 'who are the gifted and talented students? Reviewing the various published materials on worldwide trends in education for the gifted and talented, it was evident that each country viewed giftedness and talent from a different perspective. While most of the developed nations have reached a common agreement on what constitutes giftedness and talent, a wide discrepancy seems to exist as far as the developing nations are concerned. Without a proper understanding of giftedness and talent, the educational service delivery can be a meaningless exercise.

Defining Giftedness and Talent

According to Hany (1987, cited in Monks & Mason, 1993) educators are not short of definitions for giftedness. This view is supported by Gagne (1991, 1993) who stated that almost every expert in the field defines giftedness in his/her own way. Defining the concept of giftedness and talent is important because the development and implementation of

programmes depend on them. There is a link between the definition of giftedness and the identification system used (Feldhusen, Asher & Hoover, 1984, cited in Feldhusen & Jarwan, 1993).

In the past definitions of giftedness tended to be narrow, unitary definitions, often related to a particular IQ score and this would seem to be the underlying principle of the NPE (1992). Although this narrow view has been widely challenged in research and theory (Shore, Cornell, Robinson & Ward, 1991), it still operates in practice in many programmes for the gifted throughout the world. Within the research literature, though, a broadened view of giftedness has been promoted for some time.

The United States Office of Education's (1972) definition of giftedness has been highly influential in developments in education for the gifted generally. The Marland definition, as it has become known, is as follows:

Gifted and talented children are those identified by professionally qualified persons who, by virtue of outstanding abilities, are capable of high performance. These are children who require differentiated educational programmes and/or services beyond those normally provided by the regular school programme in order to realise their contribution to self and society. Children capable of high performance include those with demonstrated achievement and/or potential ability in any of the following areas, singly or in combination: (1) general intellectual ability, (2) specific academic aptitude, (3) creativity or productive thinking, (4) leadership ability, (5) visual and performing arts, (6) psychomotor ability. It can be assumed that utilisation of these criteria for identification of the gifted and talented will encompass a minimum of 3 - 5 per cent of the school population. (Marland, 1972 cited in Gagne, 1993)

Representative of the broadened approach adopted in recent years throughout the research literature and with an emphasis on gifted behaviour as opposed to gifted people is Renzulli's three-ring definition. His approach has been particularly important in counteracting claims of elitism in that his definition provides a much larger talent pool of students than is afforded by traditional psychometric approaches. For Renzulli, giftedness involves the interaction of three elements above average ability, high levels of task commitment and high levels of creativity (Renzulli, Reis & Smith, 1981)

Although the definitions vary in their scope and emphasis, they share the feature of establishing the need for special educational provisions to ensure that gifted potential is realised Borland in 1989 (cited in Gagne, 1993), for example, stated, "For the purpose of education, gifted children are those students in a given school or school district who are exceptional by virtue of markedly greater than average potential or ability in some area of human activity generally considered to be the province of the educational system and whose exceptionality engenders special educational needs that are not being met adequately by the regular core curriculum"(p 71)

The Needs of Gifted Children

Why would we expect that superior intellectual powers rob individuals of the essential human needs of nurture and stimulation? It is vital that our education system recognises and responds to the unique needs of these children. At the same time, we must recognise that gifted children are not a homogenous group.

Betts and Neihart (1988) divided gifted children into six groups on the basis of their behaviour, feelings and needs. One group of children may be successful in school while others may not, such as the children they label "underground" who attempt to hide their giftedness because of peer pressure or fear of failure. According to the authors, such differentiation has many uses—creating awareness amongst teachers and parents, planning appropriate educational programmes, and providing a theoretical base for further research. They caution that such a differentiation should not be used for diagnostic purposes (Betts & Niehart, 1988)

There is little doubt that more than ability is needed for a child to become gifted, an appropriate environment is also essential. According to Gallagher (1986b cited in McLeod & Cropley, 1989) where opportunity does not provide itself at the homes of these children, it should be available at the school. The needs of gifted students to which schools should respond include the following:

- the opportunity to spend some time with their intellectual peers
- the opportunity to go through the basic curriculum at their own pace and depth
- the opportunity to be extended and work at higher cognitive levels, and,
- support and acceptance to be who and what they are

(Milner-Davis, 1993)

A supportive environment at home, school and in the community is needed to nurture giftedness and talent as "human potential cannot flourish in an arid cultural climate; it needs nurturing urgings, encouragement, and even pressures from a world that cares. The child lives in several environments, the

closest of which are the family, peer group, school, and community, while the remotest are the various economic, social, legal, and political institutions. They all help to determine the kinds of talent that society is willing to honour as well as the amount of investment that it is willing to make in cultivating these talents" (Tannenbaum, 1991, p.36-37).

Implications for India

There is enough evidence in the current educational literature to indicate that many developing countries are making significant moves in developing gifted and talented educational programmes. Establishing the current status of gifted and talented education in India is difficult, however, due to the fact that not many published articles exist in the literature. Most of the literature that discusses gifted and talented education in Asia excludes India. It is not clear whether this is due to lack of anything significant to report in such literature or due to ignorance.

Should India respond to the needs of gifted and talented students? With a growing population and the "dubious distinction of having the world's largest number of out-of-school children" can India be criticised for not having made any (if this is indeed true) significant developments in education for the gifted and talented? It is quite understandable that India places emphasis on taking educational facilities to the rural areas thus ensuring education for all school-age children.

The recent past has witnessed a growing interest in providing special education for children with disabilities. This leads to the next question that the educators and administrators in India

should confront: Should gifted and talented students receive attention and special provisions at the expense of intellectually or learning disabled students? McLeod and Cropley (1989) caution educators against becoming involved in such a controversy as it can lead to considerable waste of energy on finding out "whether the amount saved by helping to prevent a mentally retarded person from being institutionalised for the rest of her/his life is greater than the amount which will be injected into the economy by having a gifted person exercising her/his talents to the full" (p 12-13). We would argue that both disabled students and gifted and talented students should receive equal attention in the form of special provisions. It has already been noted that these students require special educational facilities and programmes and to neglect these needs is to render this group of students educationally disadvantaged. Additionally, any policy that recognises the need for an appropriate education for children implies that gifted and talented education be provided for these students. It is time rhetoric was put into practice. There is indeed some indication that India is responding to these needs. The 1986 National Policy on Education is considered to be a landmark in the Indian educational scene. This policy was later revised in 1992 to meet the current educational needs of the country. Amongst other things, the policy is oriented towards providing equal education, adult education, and education for the Scheduled Castes and Tribes and disabled children. Though the policy does not address gifted and talented education separately, there is a statement that "it is universally accepted that children with special talent or aptitude should be

provided opportunities to proceed at a faster pace, by making some quality education available to them, irrespective of their capacity to pay for it" (NPE 1992, p 21). However, the policy does not explain who the "children with special talent or aptitude" are or what constitutes "good quality education". Defining the gifted and talented population and the programmes available for them should be considered a high priority of the educational agenda.

There is evidence in the literature to indicate that provision of education for the gifted and talented depends on the kind of policy the country has adopted. India should consider having a separate national or state policy on education for the gifted and talented. Such a policy should address admissions, level of support for pupils with special education needs, (gifted and talented students) including specialist staffing where needed, the objectives that a school should have for these peoples, screening and assessment processes, curriculum entitlement, teaching strategies and the use of support services. Different procedures are used to identify gifted and talented students. Since most of these procedures depend to a large extent on the kind of definition adopted (Pendarvis, Howley, & Howley, 1990), India should adopt its own definition of giftedness and talent. Gifted and talented students can be identified through traditional and non-traditional methods—intelligence tests, achievement tests, checklists, teacher nominations, teacher ratings, peer nominations, and work samples. The literature strongly supports the use of multiple criteria (Shore, et al., 1991.)

There are some authors who believe that appropriate curricular approaches can

circumvent problems of identification. Renzulli's "revolving door" model of identification is an example of such an approach. In this widely popular model (Davis & Rimm, 1989), a talent pool of students from a school is selected on the basis of above-average ability (McLeod & Cropley, 1989) or a particular interest in any field. The students are then nurtured according to their needs. Those students who succeed in their task or demonstrate their abilities are eventually allowed to continue in their talent pool. In the words of McLeod & Cropley (1989) "observation of student's responses to 'enriched' or 'improved' provision generates progressively more valid assessment of ability, so that the child may either graduate to more and more advanced or enriched studies, or be withdrawn from the programme at the end of a particular cycle—with greatly reduced likelihood of damaged to self-respect" (p.116). This model can be implemented in India and its efficacy in Indian situations examined. Whatever methods are used, identification procedures should follow the sequence of referral, assessment, eligibility determination and placement (Pendarvis, Howley & Howley, 1990). It is particularly important that selections are made at different times and constantly monitored because children develop at different rates and respond in different ways to programmes. Finally, the identification should be a multidisciplinary effort and should utilise multiple criteria. This is particularly vital for India where differences in cultural background, socio-economic status, and family background can affect the identification process.

Following the establishment of definition and identification, a gifted

education policy should address the alternative for programme delivery. It should be apparent to the readers that the curriculum for gifted and talented students requires modifications if it is to adequately meet their needs. This has a wide ranging implication for the school district and the schools where appropriate facilities should be available. According to Pendarvis (1993), programme modifications are important as "instruction tends to be directed to average achievement level for each grade in a school" (p 581). It should be noted that unlike the normalisation principle followed by the special educators, placement in a regular classroom can often become the most restrictive learning environment for gifted and talented students. Various options should be available for these students in both regular and special school setting. Accelerated learning, which is a significant characteristic of gifted and talented students, is also used as a programme option. Braggett (1994) states that acceleration is a "loose concept that involves students pursuing activities to extend or supplement the regular school curriculum in some way" (p 137) and can mean acceleration by grade skipping in all subjects, grade skipping in different stages, or acceleration of learning within the regular class.

Enrichment is another available option. Enrichment can mean enriched curriculum or enriched programme (Schiever & Maker, 1991). Enriched curriculum means that the regular curriculum is modified to a larger extent or extended in areas not generally covered. Enrichment programme can either be process-oriented (problem solving techniques, divergent thinking skills or meta-cognitive strategies), content-

oriented or further still product-oriented where production or development of products is the main goal (Pendarvis, Howley & Howley, 1990). Activities that contain high level of student involvement should be designed. Pull-out programmes and cluster groups are other options available where a group of schools in a district can pool their resources to provide special programme for their gifted and talented students.

The National Policy on Education states that India has Navodaya Vidyalayas to educate children who are "potential high achievers" (p 50). While this is an admirable venture towards appropriate provision for gifted students, this model needs to be extended in as many ways as possible so that many more gifted children can have their educational needs met in an appropriate way. Recently, a national daily newspaper reported about the poor facilities at Navodaya Vidyalayas. The article bemoaned the sorry state of affairs prevailing at these schools—poor quality of food, water scarcity, poor toilet facilities, lack of beds, study tables or other furniture in hostels, shortage of space to name a few (Venugopal, 1995). However, according to the author, the quality of teaching is good. Though the schools are oriented towards providing education for children from the rural areas of India, it is highly doubtful whether this goal is being achieved (Venugopal, 1995).

The key point to note here is that though the Government of India has a scheme to educate gifted and talented students there can be problems with implementing policies. It is evident that the gap between rhetoric, philosophy, policy

and practice is indeed very wide. What India should perhaps be doing is to take the initiative in starting a programme with a smaller base.

Nations throughout the world are recognising the need to respond to the unique educational needs of gifted students. This is seen as vital for development of the nation as well as the individual. When such children are not having their needs met, they become an educational disadvantaged group and their potential is often not realised. The question

that remains is whether India can afford to waste its finest resources, its children. We argue that it cannot and that it should now work towards the development of specific policies and practice to develop the outstanding potential of its children. We suggest that such policies and practice should reflect the world-wide literature and establish a view of giftedness that goes beyond traditional psychometric notions to a more all encompassing vision of human talent. India can only benefit from such an outlook.

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Examination Reforms : Impediments and Breakthrough

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Examination reforms have remained a bane for educationists since time immemorial. This paper discusses the historical background of examinations, their need and emergence and their present day state of decadence. It makes an attempt to examine the reasons for the nemesis of examination, enumerates the hurdles in the achievement of goals and explores a pragmatic approach with a suggestion towards creating a system which optionalises them.

This paper also highlights the adverse influence of undue and unnatural emphasis on examinations. As a consequence, the discontent quotient is seen to be on the increase. It recommends that this is the right time to introduce reforms. The reforms must, ultimately, aim at gearing up the system to bring about qualitative improvement in school education.

Examinations in Perspective

EXAMINATIONS have existed since time immemorial. Its first traces were found in the history of China where individuals were selected for high offices of public responsibility as far back as AD 909, through a most influential examination

system. Indian mythology is also replete with instances of examination of intellectual and physical prowess. The system was open, fair and transparent because the feats were witnessed by scores of people. The oft-cited names of Arjuna and Ekalavya from the *Mahabharata* and

Lord Rama from the *Ramayana* come to mind in the context of royal competition of human potential. The Bible, too, illustrates the incident of examining the competencies of the fugitives of Ephraim who were crossing the river Jordan. Each one of them was challenged by the Gilead guards and asked to repeat, "Shibboleth". Those who could not pronounce the "sh" and said "Sibboleth" instead of "Shibboleth" were dragged away and killed, (Judges 12: 5-6 *The Living Bible*). Thus, examinations were considered a viable and justiciable instrument for measuring the various facets of human personality.

Present Day Scenario

The present day scenario portrays a vitiated picture of the erstwhile sanctified role of examinations. The proliferation of examinations and their pernicious domination from the cradle to the grave has placed them in the list of "inevitables". This signifies the sheer centrality of the examinations in the kind of society we live, not simply as an educational tool but most importantly, as a social phenomenon. The all pervasive role of examination with all its obvious infirmities, has diluted the very importance of its being used as a sound device for improvement of individuals' skills.

For nearly half a century as they have been functioning, examinations have been recognised as one of the debatable features of Indian education. The magnitude of the problem has been growing at an alarming rate and has been the bane of many a policy planner and practitioner for the past four decades, but nothing constructive by way of improvement has materialised. The justification for examination reforms arises not merely from academic considerations

but also from socio-economic and political viewpoints. Examinations, along with teaching and learning, in fact, constitute the trinity of functions in the educational process. Examinations, over the years, have tended to be an instrument for testing memory. Learning, today, has become a mechanical process of acquiring skills and teaching has become largely a process of coaching for examinations, apropos "whatever is tested is taught".

The relationship between examinations, standards of teaching and learning are intimate. Of the three, examinations play a pivotal role, so much so, that any improvement in them automatically results in the improvement of the others. Therefore, the objective of reforms should be to make examinations an instrument of quality education. That is why, time and again this vital issue has been deliberated upon by a number of commissions and committees, each one of them straining to reform the impasse created in examinations. The first of its kind was the University Education Commission (1948-49) which recognised the problem of examinations as chronic and regretted that examinations were not organically related to the process of education. The commission further recognised the need for ensuring validity and reliability of examinations. It advocated the development of standardised tests, the use of periodical tests to contribute to the overall assessment of students and emphasised the need for orientation of teachers. The Mudaliar Commission (1952-53) in its report emphasised the significance of internal assessment, particularly at the secondary stage and also advocated the use of continuous and comprehensive evaluation

for the purposes of bringing about all-round development of the students. Besides, the Commission also suggested model proforma for maintaining school records.

The Education Commission (1964-66) made a very comprehensive review of the then prevalent examination system in the country and suggested the testing should be diagnostic, Continuous and Comprehensive Evaluation (CCE) should be gradually introduced at the secondary stage and the comparable standards to be achieved be defined at each stage of education, namely, primary, secondary and higher education. The Revised National Education Policy—1986 postulated that the examination system should be recast so as to ensure a method of assessment that is a valid and reliable measure of student development and a powerful instrument for improving teaching and learning. The Ramamurty Committee (1990) for review on NPE recommended that students may accumulate credits and should be allowed to transfer these credits in case they change their institution or board. It also recommended that students should be allowed to have multiple entry in the education system.

Reasons for Nemesis

Most of the issues related to examination reforms do not have any state or national boundaries. They are the concern of educationists across the globe. We are convinced that our system of education is very much examination-ridden. Examination has been dubbed a 'gamble' and a 'necessary evil'. Award of marks and declaration of results have become the focus of all the ventures related to

examinations, and any improvement in the level of achievement and proficiencies of the pupils which should, in fact, be its real purpose, stands completely relegated to an obscure background.

Some of the reasons why the image of examination has been tarnished are given below.

1. *Mismanagement in Examination*

Lack of advance planning, leakage of question papers, inaccuracies in result preparation, ineffective coordination and absence of close monitoring from pre-conduct until the declaration of results are some of the major drawbacks in the management of examinations.

2. *Its Scholastic-oriented Nature*

There is an over-emphasis on scholastic attributes at the cost of non-scholastic attributes, the latter being equally essential for all round development of the learner.

3. *Unbalanced Question Papers*

The question papers are stereotyped and based largely on factual information which does not involve higher mental operations. They neither probe the untapped potential of the candidate nor do they enlist her/his enthusiasm. It is like one of those end-of-the-academic-year ritual which one has to go through impassively without any sense of involvement.

4. *Predominance of Essay Type Question*

Examinations invariably resort to the inclusion of essay-type questions. The scope of these questions is narrow because they cover only a limited course content, thus adversely affecting the content validity. Since they do not provide a wide spectrum of assessment they come in the way of mastery learning. The chance factor also plays a vital role in clinching the destiny of many a candidate.

5 *Subjectivity in Marking*

Supply-type questions lead to subjectivity in marking. This creates a lot of intra-examiner and inter-examiner variability in marking and the consequence is misclassification of students

6 *Limited Application of Assessment Technique*

The conventional type of question paper does not provide for the application of multiple technique of assessment as it is usually confined to paper and pencil tests. In this type of examination a large number of abilities remain untested

7 *Questionable Validity of a Single-stroke Examination*

It is unrealistic to measure all behaviour possibilities acquired by the learner over a period of one academic year with single-stroke examination of three-hour duration. Undoubtedly, it questions the validity of examinations which are being used for making discrimination amongst students.

8. *Inappropriate Interpretation of Raw Scores*

Raw scores do not reflect the true abilities of the individual. Yet they are being used for making distinction amongst the students on the basis of single number unit. Various kinds of errors which creep in and contaminate the scores, work as a deterrent for taking raw scores in absolute terms.

9 *Pitfalls of Numerical Marking System Vs Grading*

The current practice employed in the examination is to use the 101-point scale. It is claimed that the entire scale is divided into hundred units of equal sizes. In practice, it is not true. In such a situation it is more justifiable to club the students in the bands of ability range rather than

classifying them on the basis of single number right score

10 *Non-Application of Scaling Techniques*

The raw scores from each test yield numbers that do not have necessary comparability with numbers within the subject and across subjects. Conversion of raw scores into values on some common scale is essential. Many a time, we not only want comparable values from different tests, different classes and different examiners, but also values that have some standard meaning. In the present day examination system, this seems to be a remote possibility in the absence of any scaling technique

11 *Flawed Practice of Choosing the Best Four Out of Five*

The erroneous practice of choosing the best four out of five does more harm than good to the students. It neither evokes their interest nor enlists their enthusiasm in the fifth subject they opt for. Besides, not only does it frustrate the concept of mastery learning in that subject, it also leads to the lowering of the prestige of the examining agency

12. *Erroneous Method of Calculating Pass-percentage*

The 'adding up of marks of theory and practical gives a distorted picture of pass-percentage wherein a candidate securing hundred per cent in practicals and failing in theory is declared as 'passed' and 'promoted'. The very essence of conducting theory and practical examinations separately stands defeated as each of them aims at assessing altogether different kinds of skills

13 *Arbitrary Award of Grace Marks*

The trend of awarding grace marks came into practice to enable a borderline case to secure promotion to the next class. The

award of grace marks is decided arbitrarily and not on the basis of any scientific rationale. Unfortunately, the general impression that it conveys is that even in its operation it is tainted with a feeling of sympathy and mercy.

14. *Re-evaluation—an Eyewash*

In spite of all the precautions taken by the examination boards for reducing the element of subjectivity in marking, there may be some lapses making re-evaluation imminent. In most of the boards, re-evaluation at best amounts to re-totalling and not re-examining the answer-scripts by competent examiners. This not only leads to frustration amongst the student community but also reflects adversely on the credibility of the system.

15. *Whipping up Frenzy of Fear and Tension*

The advent of any examination, makes even the toughest and the brightest of students quake with fear. Come the months of March and April and it is a common sight to see the student community in the grip of examination phobia. The not-so-bright get paranoid and resort to various kinds of malpractices because they do not want to be branded as failures. This exclusive emphasis on examination for deciding intellectual attainment plays havoc with the mental and physical health of the students.

Armchair Efforts in the Direction of Reforms

The policy planners in education do not go to the extreme of advocating abolition of examinations. But if examinations are necessary, a thorough reform of these is still more necessary. The most challenging aspect of any reform lies in its implementation. This aspect of the reform

becomes still more formidable when the diversities in the educational system are as vast as in a country like ours. The necessary infra-structure for orienting teachers and training examiners—a costly proposition—has not been figured out. Such armchair efforts will not bestow the blessings of reforms in the required direction.

Any programme of reforms will not succeed if it is top heavy. Examination reforms, ironically, have suffered from this lacuna throughout. Besides, none of them has been implemented in its totality. It has always been a piecemeal approach, with the result that it has failed to achieve its intended goal. Many aspects of the reforms have remained confined to the covers of policy files or at best have been the monopoly of a few professionals. The purpose of examination reforms, to bring about qualitative improvement in the teaching-learning process, has remained intangible and thus has failed to percolate to the grassroots level.

Goal Achievement Vs Impediments

Goals

- De-emphasis on memorising
- Continuous and comprehensive evaluation incorporating both scholastic and non-scholastic aspects of pupils' development
- Wider use of test results not merely for the assessment of levels of pupils' achievement but mainly for its improvement through diagnostic, remedial and enrichment programmes.
- Elimination of chance factors and subjectivity
- Introduction of semester system from the secondary stage onwards

- Use of grades in place of marks in determining and declaring the level of pupils' performance proficiency
- Introduction of concomitant changes in instructional materials and methodology of teaching
- Improvement in the mechanics of management of examinations and declaration of results

For the achievement of the above enunciated goals, the multidimensional improvement of written, practical, oral examinations and other techniques of assessment of learning outcomes is warranted

Impediments

In spite of the large areas of agreement and the pressing need for examination reforms, much headway has not been made in this direction. The reasons for the failure seem to be the following .

- Most of the teachers, educational administrators and the community at large is oblivious of the intricate technicalities of examinations which affect reliability, validity and objectivity. Unfortunately, a large section of the society suffers from inertia which goes against any change. Moreover, an alternative system has not been clearly spelled out before them
- There are vested interests in perpetuating the existing practice. Functionaries associated with the examining agencies do not want change but wish to carry on with the established system
- The various agencies which could have pressed for examination reforms have shown considerable lack of will in using

authority, advice and legal privilege to bring about a change

- Individually, teachers, parents, students and institutions may appreciate the idea of examination reforms but when it comes to certification they are all obsessed by the pre-eminence of a certificate issued by an examination board
- Linking of degrees with job prospects, thereby reposing undue importance on certification, is yet another impediment in the path of examination reforms

Exploring a Pragmatic Approach

Though there are a number of bottlenecks in implementing examination reforms it is still not a no-win situation. There is still a ray of hope. The following suggestions for examination reforms are worth considering if their implementation in totality is ensured. By now it is very clear that the piecemeal efforts neither achieved the desirable results in the past, nor would they do so in the future.

1. Universal Implementation of the Semester System

The greatest plus point of this system is that it reduces the workload of both the students and the teachers. Besides, it also inculcates regular study habits amongst the students. We need to ensure that the semester system is implemented at every stage of school education. However, to begin with, it needs to be introduced at the secondary stage.

2. Achieving a breakthrough in Continuous and Comprehensive Evaluation

CCE is founded on the fundamental

concept of 'those who teach should examine' In this sense, examination becomes an integral part of the teaching-learning process CCE mirrors three aspects of pupils' achievement, both in scholastic and non-scholastic areas, namely, pupils' progress with regard to his/her own progress, peer group's progress and expected level of attainment set by the teachers Besides, CCE has in-built scope for diagnostic and remedial measures Therefore, implementation of CCE needs to be ensured at all stages of school education.

3 *Declaring Public Examination Optional*

Effective implementation of CCE would help enhance the credibility of school-based system of evaluation thereby reducing the craving for obtaining public examination certificate from the board. A time would come when the teaching-learning community would repose their faith in CCE, making public examination optional

4 *Ensuring Transparency and Accountability*

Although the problem of visibility and transparency in the school-based system of evaluation is not pronounced to the extent of a public examination agency, constant efforts must be made for teachers' accountability in the form of not only returning marked answer-scripts but also defending their observations and comments

5 *Compulsory Passing in Theory and Practicals*

Practical and theory examinations assess different skills; therefore, marks secured

in them should be shown separately This would help bring in the element of seriousness amongst the students and would project the true picture of individuals' potential

6 *Setting up of Question Banks*

Question banks need to be set up for generating quality questions of different types measuring various objectives of varying difficulty levels This should cover all the curricular areas of school education. Initially, it may be set up with the assistance of professionals and teachers but later it may be updated by the teachers themselves Such question banks should be made accessible to both teachers and students so that teachers can use them for testing purposes and students for learning purposes

7 *Scaling*

Raw scores do not necessarily have any comparability, nor do they reflect the true abilities of the individuals. Therefore, raw scores need to be converted into scores which have some standard meaning and can also be used for the purposes of ensuring comparability not only within and across the subjects but also within and across the institutions. This calls for a wider use of scaling methods

8 *Grading*

Assessment of human potential in terms of single number unit is unjustifiable The complexity of human nature cannot be measured by the frivolous 101-point scale Therefore, it is always prudent to classify the pupils in the ability band Each ability band may be designated with a letter grade These bands are controlled by a scale

which may be shorter while applying to the lower classes, where finer distinctions amongst the pupils are not very essential, and longer for the higher classes

9. *Grace Marks*

At times, award of grace marks is desirable. The present arbitrary practice of awarding grace marks should be done away with. The award of grace marks should always be decided on the basis of passing probability which would make it more scientific and rational.

10. *Computerisation*

This is an era of technology. The proliferation of the state-of-the-art technology enables us to use the services of computers, fax and electronic mail. They may be put to use in the various spheres of examination reforms, namely, question banking, maintenance of pupils' progress card, scoring, consolidation of scores for declaration of results and performance analysis with a view to studying the backwash effects and providing the necessary feedback for improvement.

11. *Endeavours for Evolving a Common National Test*

Those students who wish to opt for higher

studies or for professional courses may appeal for a common national test. The prevalent practice of writing the examinations for a number of institutions takes its toll on the personality and confidence of the students. An average student is not only traumatised but also has to bear the brunt, financially. Therefore, there is an urgent need to introduce a common national test wherein one time performance of the candidate may be considered to be an indicator of his/her potential.

All circumstances conspire today to exert undue and unnatural emphasis on examinations. They have increased the discontent quotient against examinations. This is an opportune time to effect reforms before criticality is manifested in discontent. Reforms should aim at taking the discontent level down to twenty-five per cent or more so that the system stays in place long enough for continuity before it rises to intolerable levels again. Reforms should be introduced with tenacity and resilience. This is essential because it involves handling of human material. Ship-shod experiments would only go to prove the foibles in the area of examinations, for sans a strong foundation one can build only a house of cards.

Institutionalising Environmental Education in Schools : Towards Defining the Role of DIETs

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The need for developing environment consciousness among children is of paramount importance in the contemporary societies. The environment in this context is taken as a whole which includes not only the physical or material factors but also the economic and cultural ones. The author, in this paper, visualises the role of District Institutes of Education and Training (DIETs) in planning, organising and implementing a comprehensive programme of environmental education at the district level. He further cautions that the salutary effects or efforts made by different agencies will not be sustained unless these are accompanied by appropriate curricula, teacher training and a mechanism for sustained implementation and follow-up of the programmes.

RECOGNISING the potentials of education in creating an environmentally conscious society, the National Policy on Education—1986, Government of India, states that "There is a paramount need to create a consciousness of environment. It must permeate all ages and sections of the society, beginning with the child. Environment consciousness should inform teaching in schools and colleges. This aspect will be integrated in the entire educational process".

Consequent to this, several concerted

efforts have been made in the country, both at the national and individual state levels to reorganise the content and methodologies of teaching at the school level to integrate and infuse environmental perspective. These efforts have been intensified with the Supreme Court's Directive (1991) to make environmental education (EE) compulsory at the school level.

Coupled with the task of reorienting the textbook content in terms of the environmental perspective, several

training programmes have also been organised in the country to train teachers in the process of effectively integrating EE into the school curriculum. Significant ones are efforts under "Mass Orientation of School Teachers" and "Environmental Orientation to School Education", schemes of the Ministry of Human Resource Development, Government of India, and Teacher Training programme organised by several agencies (government and non-government) under the "National Environment Awareness Campaign" of the Ministry of Environment and Forests.

While these are salutary, when one thinks of the efforts required to effectively introduce and sustain EE in schools, it becomes apparent that much more needs to be done in the field.

Surveys conducted by UNESCO-UNEP (1982), Ravindranath and Razak (1988), Meera and Ashish (1992) in ascertaining EE requirements in the country have clearly indicated that the most pressing requirements are in the areas of

1. developing and distributing quality teaching-learning materials;
2. equipping teachers and resource persons with the knowledge, understanding and skills in imparting EE;
3. conducting action research and experimentation for promoting EE,
4. networking with various institutions for information, resources and expertise.

While these challenges are being attended to through various institutions in the country (government and non-government), the role of DIETs in effectively implementing EE in schools becomes crucial. This paper is an attempt

at outlining the scope and plausible role which DIETs can play in institutionalising EE in schools.

Mission and Objectives of DIETs

As principal institutions at the district level, DIETs are envisaged to play a crucial role in bringing about qualitative improvements in the educational system. The guidelines on DIETs developed by the Ministry of HRD (1989) state DIETs' mission as

To provide academic and resource support at the grassroots level for the success of the various strategies and programmes being undertaken in the areas of elementary and adult education.

As elaborated in the guidelines, the specific functions of DIETs include

1. imparting pre-service and in-service training to elementary school teachers and instructors of non-formal education (NFE) and adult education (AE),
2. providing planning and management support to schools and school complexes,
3. providing academic and other resource support to elementary schools for qualitative improvement,
4. undertaking evaluation and monitoring of educational programmes in the district;
5. conducting action research.

Of these functions, when examined in the light of needed efforts in EE, a few roles could be delineated as specific to EE. These are outlined below.

Planning and Organising EE in the District

The source book on EE (Unesco,) defines

"environment is not only the sum of all the material things that constantly interact with each other and which make up the mosaic of the countryside landscape. It is more than this. It also includes the economic structures and the outlook and habits of people in different parts of the world. The environment as a whole therefore includes not only the physical or material factors but the economic and cultural ones"

Environment, as defined above, will have to be visualised as a mosaic of natural and man-made environment with objectives, forces, situations and factors all interacting with each other to form the complex whole. It is a complex web of life. The factors in such a complex whole are interdependent and interwoven.

Given this complexity and dynamism of environment, the objectives of Environmental Education would not only include making children appreciate this complex and vibrant nature of environment but also enable them to understand its related problems and issues and equip them with necessary knowledge, attitudes and skills to tackle them confidently. To this extent, it is a life-long education. Hence EE should not be treated as 'just another subject' or 'mere adjunct to the existing curriculum'

To make EE effective, we need to look at its contents and methodology in a much more comprehensive manner rather than the usual myopic approach of adding a few concepts of environment or ecosystems here and there. Besides, we also need to harness the potentialities of various instructional methods and media for promoting environmentally positive behaviours corroborating the efforts of various agencies (government and non-

government) in its implementation. Such a perspective would demand planning and directing every effort to incorporate environmental perspective in all segments of the educational system—curriculum construction, educational material production, training, assessment practices, etc.

While the broad policy decisions of EE curriculum are made at the national and state levels, DIETs as principal institutions at the district level, have an important role in translating these into attainable aims and objectives and making EE meaningful and relevant to children. DIETs could execute this role by

- Carrying out exercises to understand the local environment, its dynamism, complexity, problems and issues to bring in the holistic perspective to environmental educational programmes. More specifically, it would require creating databases on the various environmental parameters pertaining to the district such as (a) demographic characteristic, (b) faunal and floral diversity, (c) land form and use, (d) factors relating to the carrying capacity of the district, etc., and analysing them for arriving at specific understanding of the local environment,
- Developing EE curriculum goals, objectives and sequence based on the above database,
- Evaluating existing programmes to explore potential of EE infusion;
- Drawing out EE content and programme of action,
- Working out specific approaches and strategies for incorporating the above thrust into the curriculum—at formal, non-formal and adult education levels,

- Collecting resources—curricular materials and reference,
- Organising training programme for the various functionaries,
- Conducting follow-up, monitoring and evaluation programme,
- Planning for networking with other environmental agencies and individuals for information, expertise and resources,

Developing and Disseminating EE Materials

While planning EE in a comprehensive manner is one thing, implementing it effectively is yet another thing. In order to ensure effective implementation, as one of the pre-requisites, DIETs will have to visualise, develop and disseminate various types of materials. These materials could be of the nature of

1. Information materials on the various environmental parameters and issues of the district.
2. Training materials for pre-service and in-service teacher training.
3. Teacher materials—handbooks, manuals, source books, instructional aids, kits, etc., for incorporating EE.
4. Student materials—activity books, workbooks, etc.

In the last few years, several efforts have been made by non-governmental agencies (NGOs) under Environmental Orientation to School Education scheme of the Ministry of Human Resources Development, Government India to develop EE materials in local languages. The scheme is based on the perception that a compact area having a uniform ecosystem would have similar environmental concerns and, therefore, such an area can form the unit for designing one set of

programme for implementation in the schools and the community in that area (MHRD, 1988). In this context, the generalised textbooks/syllabi/programmes decided at the State level need to be supplemented and complemented with the local information and made relevant in terms of the parameters that define the environment of the district, the interactions of different environmental factors operating at the local level, their effects including problems and issues.

It needs to be appreciated that it is only when EE concepts are taught in the local environmental context that children would get a broad frame of reference to relate to national and global level understanding. When this understanding is provided using local examples and situations emphasising appropriate actions, EE becomes more realistic, meaningful and interesting to children.

As a part of this scheme, as already mentioned, several types of EE materials have been developed in the country. These include game materials, information brochures, workbooks, activity manuals, teachers' handbooks, songs, and puppet scripts, audio-visual aids, etc. These materials could be procured by the DIETs, adopted and translated for use in their districts.

Analysing the different approaches followed by the agencies, Ravindranath et al. (1994) list three broad approaches. They are

1. Developing educational materials around locale-specific environmental problems or issues and linking them with appropriate concepts in the textbook.
2. Developing educational materials on most essential environmental themes.

or topics and integrating them into the school curriculum

3. Developing educational materials around biogeographic elements of a locale (specific to the ecosystem) and introducing them into the school curriculum.

In developing EE materials, DIETs can take necessary care to build in enough flexibility for teachers' use. This would mean giving enough scope for the teachers to adopt the materials to their classroom situations and use them. At this juncture, the philosophy followed by the Norwegian Environmental project (grade 1-6) is worth quoting. The project follows that "teaching learning units in EE must not be pre-planned as ultimate solutions as regards teaching. Neither are they ready-to-use teaching packages which will reduce the importance of the teacher's own efforts. It is intended that the unit should serve as ideas in outline as frames of references or starting points for teaching. The final version must be arrived at by the teacher and pupils themselves in the classroom".

Training of Functionaries in EE

EE as an important educational thrust has its own content and methodological characteristics. Given the importance of EE and the spirit with which it has to be imparted, teachers, in addition to transmitting knowledge and information, have to be prepared to assume much greater roles of enthusing and enabling children in the protection and conservation of environment. This brings into focus the need for organising effective teacher training programmes.

DIETs, vested with the responsibility of planning and organising programmes for training and re-training teachers and

instructors of non-formal and adult education, could emphasise the following in their training programmes

1. Enabling teachers and teacher trainees in integrating EE thrust into the school curriculum and developing need specific curriculum,
2. Providing teachers with an understanding of the local environmental issues and problems as well the essential concepts in EE;
3. Training teachers in the content and methodologies of EE with specific reference to the use of techniques such as conducting environmental surveys, observations, field trips, nature education camps, etc ;
4. Helping teachers in developing locale specific EE materials in local languages,
5. Training teachers in the use of computers available at DIETs for preparing EE lesson plans,
6. Training teachers in the processes of evaluating EE
7. Training teachers in adapting locally available EE materials.

As most of the topics suggested above involve the use of specialised techniques by teachers, the effectiveness of the training sessions would be enhanced if the understanding about the technique/s are provided through these very techniques. For example, while training teachers in the use of surveys, knowledge about the importance of surveys in understanding environment could be provided to teachers by actually involving teachers in conducting surveys on different aspects of environment. Similarly, field trips could be organised as part of training sessions to help teachers understand the importance of field trips.

Follow-up Monitoring and Evaluation

It is a fact that many a well-designed programme fails for want of appropriate mechanisms of follow-up/monitoring and evaluation. Monitoring and evaluation are complimentary to each other. While effective monitoring reveals what is happening, evaluation tells how well it is happening. With EE being a fairly new thrust and teachers to be trained to implement this thrust, DIETs will have to plan adequately for monitoring and following up to ensure that the programme inputs are well received and utilised. Such an effort would enable DIETs, besides getting feedback on the effectiveness of the programme, in assessing changes (if any) to be effected in the overall programme/strategy and additional efforts to be incorporated.

Hence, as a part of the regular monitoring and follow up, it may be worthwhile for DIETs to plan and maintain a systematic record of programmes organised, teachers trained, inputs provided, feedback received on them, etc. For example, a record of the individual teachers trained, his or her specific training needs in EE, courses/workshops attended by him or her, EE activities or programmes organised in his/her school, etc., could help DIETs in continuously assessing further efforts and avoiding duplication of the programme inputs. The computers available at DIETs may be adequately exploited to create these databases and to retrieve information appropriately for follow-up monitoring. A few of the ways by which DIETs can continuously monitor the programmes are through

- 1 maintaining proper records or inventories of the programme inputs

- and personnel trained,
- 2 visiting schools regularly to understand the difficulties of teachers in the implementation of the programme and provide guidance and support,
- 3 conducting review meetings periodically;
- 4 organising workshops/seminars/ refresher courses—long-term and short-term courses, etc.,
5. training and inducing personnel from non-governmental agencies for monitoring EE activities in schools, etc.

Networking with Other Organisations

Networking forms an important component of DIETs' overall function in effectively implementing EE. Through networking with non-governmental and government departments, DIETs can bring to the programme necessary information on environment, support and cooperation of appropriate resource persons/agencies and their expertise. The agencies could also be involved at various stages of the implementation of the programmes, as many of the non-governmental agencies work at the grassroots level and with schools. In this regard, the model evolved by the Centre for Environment Education, Ahmedabad, in conducting teacher training programmes is worth highlighting, as this model could be emulated by DIETs.

The model involved identifying potential NGOs in the field of EE, training them in EE content and methodologies, and using their expertise to plan and conduct teacher training programmes in local languages in their respective states. The model has helped in not only training a

large number of teachers, but also in developing locale-specific EE materials and effectively monitoring EE programmes and activities.

Realising the importance of Environmental Education, several efforts have been made in the country to incorporate EE at different levels of education. However, it needs to be realised that the salutary effects of these efforts will not be sustained unless they are accompanied by appropriated curricula, teacher training and mechanism for

sustained implementation and follow-up of the programmes. There is need to look at EE programmes in a more holistic and comprehensive manner and corroborate the efforts of various agencies (governmental and non-governmental and action groups) in the effective implementation of EE.

DIETs created as principal institutions at the district level with the sole mission of improving the quality of education, have immense scope and potential for institutionalising EE in schools.

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A Sociological Analysis of the Problems of Primary Education in India

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Various attempts have been made to provide free and compulsory education to all the children in the 6-14 years age group since Independence. But the goal of universalisation of elementary education still seems to be remote. The author, in the present article, identifies a number of reasons for this dismal situation. These are rapid population growth, lack of corresponding socio-economic development, non-flexibility of the system, single entry procedure and little progress on the adult education and pre-school education fronts. The author makes a variety of suggestions to cater to the primary educational needs of various target groups including the handicapped, the tribals and the rural poor.

INDIA is an agro-rural society. Seventy-four per cent of our people live in villages depending on agriculture for their living. Even all these years after Independence, development in all spheres of life does not seem to be up to the expectation. People are largely tradition-bound, showing resistance to change, more so in rural and tribal areas. Widespread poverty is a glaring fact and 50 per cent of our people are below the minimum acceptable

standards of living. Concomitant to poverty are the problems of alarming growth of population and large-scale illiteracy, which are complicated by stratification in social structure in terms of religion, race, language, caste, etc. All these perhaps account for the non-responsiveness of the majority of our people to modern values. In such a situation, development for the purpose of national reconstruction is a difficult task.

The Constitution of India has accepted the socialistic pattern of living as its ideal. It has also stated in its Preamble that it aims at creating a society based on justice—social, economic, and political, liberty of thought, expression, belief, faith and worship, equality of status and opportunity. Further, it aims at promoting among all citizens fraternity, assuring the dignity of the individual and the unity of the nation. It implies the creation of a society free from all forms of exploitation, based on individual liberty, social solidarity and co-operation. The Government of India wants to bring about these changes through secular and democratic ways. However, one of the widely accepted ways of bringing about social, economic, political and cultural transformation of any society is through education. It is believed that to make education instrumental in different aspects of social change educational opportunities should be open in every conceivable way to the larger sections of the people, viz., rural tribal and urban sections. The same idea has been expressed by Prof. Dube^{*}. According to him

In the process of nation building, education can play an important and supportive role, if it is handled with imagination. It can emerge as a powerful instrument of emotional integration between different sections of population who are divided because of religion, ethnic origins and affiliation, language and regional sentiment. By demolishing stereo-typed images, it can help to reduce social cleavages and by emphasising commonality of interest, it can promote participation of larger sections in selected areas of social action. It transmits the cultural heritage from one generation to another. It confers status on, and invests

legitimacy in individuals and groups that are looked upon as models of emulation. Surveillance of environment is yet another function of education. It helps to focus attention on pressing problems and raises issues for consideration. It also functions as an instrument of consensus building. It enlarges mental horizons and brings about cognitive changes.

Finally, it encourages new ways of thought and action. As the primary stage of education is one which lays the foundation for the above mentioned functions of education by imparting at the earlier stages the basic skills of reading, writing and arithmetic, it is very important that it should be properly designed and implemented so that it will have access to all sections of the child population, thereby making it a real foundation for democratic and secular way of living. Article 45 of the Directive Principles of the Constitution guarantees free and compulsory education to all the children of 6–14 years. In addition, Article 46 and 15(1) also guarantee the right to education to the weaker sections and no discrimination against women, respectively.

Although various Articles of the Indian Constitution guarantee free and compulsory education to various sections of the child population, primary education in India, ever since its beginning, has been saddled with many basic problems and it lacks the ability to cater to the desired primary educational needs of the children of the 6–14 years age-group of our society unless it is renewed suitably. The problems and issues of primary education in our country have been neglected and no serious attempt to solve them has been made

^{*} Dube, S C 'The Problem of Nation Building', *Indian Express*, 1 July 1990, Ahmedabad Edition

Primary education in India as it stands today, has become the monopoly of a few sections. There is a large section of the child population (viz., SC, ST, OBC and slum children and girls) which has not been brought to school, although Articles 45, 46 and 15(1) of the Directive Principles of the Constitution are stressed in all teacher-training colleges, other educational courses, educational conferences, symposia, seminars, etc. The main reason for the failure of primary education to reach the children of the masses is the unlimited and unchecked population growth. Had the population growth been minimal, access to primary education would not have been very difficult. Because we have attached democratic norms to each and every aspect of our life, it has not been possible to control the excess of growth rate of population, which in turn, has created multi-dimensional problems in all fields of development including that of primary education. It is because of this reason that primary education in India is continuously expanding. And we find very little time to devote to qualitative improvement of primary education. Our government should, therefore, try to intensify its efforts to check the unlimited explosion of population through a variety of psychological inputs and material benefit schemes. And in extreme cases, certain measures like cutting off/restricting various developmental benefits to non-responding cases may be followed, as otherwise, the per-capita income and standards of living in our country will be continuously declining as compared to that of developed nations. The implicit meaning here is that unless common men living in our society come upto a particular level of development (mainly referring to mental

development i.e., to see things in a broader perspective in the wider context of the nation in which they live), they cannot appreciate the concept of 'small-size family'.

In some communities, possessing more number of children may be a 'status symbol' (e.g. many rural and tribal communities of India) and so the inhabitants of such societies opt for more children. Some religions are against artificial birth control methods. Another reason is that, in many families (lower-middle class and still lower-class families), more number of children means more earnings and as such many parents in such families do not like to practise birth control. This seems to be one of the most important reasons amongst the large majority of the non-responding cases to the concepts of 'small-family norm' in the Indian situation. In fact, this particular cause will have to be seen from a broader perspective of the existing economic conditions of our society, wherein, there is a lot of exploitation of unskilled, semi-skilled, illiterate folk by rich people in rural areas, and by business people, entrepreneurs, industrialists in industrial and urban areas. It means that if we have to ask our working class men and women to have preference for small-size families vis-a-vis large-size families, it is the bounden duty of the government to see that the rich people (landlords in rural areas), business people, entrepreneurs, capitalists, and industrialists implement the modern wage policy properly so that working class people (who constitute the majority population in any society) get their basic needs fulfilled without any hitch. If our government cannot ensure even minimum acceptable standards of living to our working class, then the

government is not justified in asking our working class to lessen their family sizes. Although this seems to be the major cause, certain other factors mentioned earlier also contribute to the intensification of the problem of overpopulation. In other words, uneducated, illiterate, selfish, egoistic, narrow-minded and religiously fanatic people in any society cannot appreciate the concept of 'small-size family' and so educating them to respond suitably to cater to the above mentioned end becomes very important. Further, if the population problem is not properly sorted out, although one can establish a number of schools to reach the quantitative targets, educational facilities of all types cannot be provided to all the tremendously growing groups of population without proper economic development. Although in a democratic society one would opt for educating and convincing the masses towards the concept of 'small-family norm' many a time it may be very difficult and sometimes even impossible to make the masses respond. But when we try to apply our mind and reason out things, it seems that having had illiterate, uneducated and traditional people to a great extent from the beginning days of independence in this country, it is good to have certain very mild forms of impositions in the beginning which may be gradually relaxed as and when the level of different sections of our society advance, when it is just impossible to convince and intellectually appeal to masses in a large way through education alone. And/or various economic benefit schemes provided after a particular level of basic-need satisfaction (just sustenance level) in non-responding cases to the developmental measure of small-family norm may be withdrawn till the time they

respond suitably. A wide variety of propaganda measures can also be used to hammer upon the psychological set-up of the non-responding cases to create favourable attitude towards 'small-family norm'. But when one analyses our radio-broadcast and telecast-programmes, it is very much evident that enough number of programmes are not directed towards this end. And quality wise also, there is much to be desired from them. Therefore, suitable corrective measures should be undertaken as an urgent need to restructure the various media programmes so that radio and TV may become effective instruments of creating favourable attitude towards the concept of 'small-family norm' amongst the masses of this country. Otherwise those underdeveloped countries which do attach democratic norm of dealing with each and every aspect of development can only succeed philosophically to bring about development of an all-round fashion amongst its citizens. This is how any government in any developing society (including those of democratic societies) will have to act upon from the beginning days of development to solve the herculean task of population problem, as it is instrumental to educational development and development in other facets of life.

The second reason as to why primary education has not reached the children of the masses is because of the lack of the corresponding development in socio-economic sphere of the large sections of Indian society viz rural, tribal and slum communities, caused by failure to vocationalise education at the +2 stage. This has resulted in well known evils like wastage, stagnation, absenteeism and non-enrolment in the formal stream of primary education. Failure to vocationalise

education at the +2 stage is because of the lack of sufficient number of basic, in-depth surveys to identify the extent of material resources available in all parts of the country (hilly areas, plain areas, forest areas, desert areas and estimating fresh water and sea water resources) which could be utilised for developmental purposes have not yet been undertaken fully so far. Lack of technology, red-tapeism, not providing infrastructure, lack of role-discharging quality among the people who are at the execution level, lack of suitable and effective policies are some of the other reasons which have contributed to the non-identification and non-tapping of various resources throughout the country. Because we do not have sufficiently fair knowledge of the available resources in the country, alongwith other drawbacks of policies, planning and implementation, planning education to tap and utilise material resources has become a far-fetched thing. Of course, identifying the material resources throughout the country is a stupendous task, for which the help of various fields of science is required. India is not poor in scientific and technological manpower. It is creditable that India today is the second largest country in the world in possessing scientific and technological manpower. But the poor state of affairs is that we are very slow in our action. Only when we have a reasonably fair knowledge of the resources, can efforts be made to tap and utilise them for better production. It is only at this stage that education can be meaningfully linked up (vocationalised) with economic development, so that vocationally trained and educated individuals can help in greater and greater production, thus contributing to higher growth rates of the Indian

economy. In some of the productive sectors of the economy, it has also been experienced by the people of this country that efforts are not being made to provide the basic infrastructural facilities needed to tap and utilise certain resources very effectively, e.g. (i) Permanent Irrigational facilities are yet to be provided to most of the fertile areas in the country, (ii) Quality nets which can get more catch have not been provided to fishermen in different areas. Of course, providing all such facilities of permanent irrigation by canal water supply, giving quality nets to all fishermen and many such other require huge amount of expenditure, which a developing country may not be able to afford at a particular point of time. Developmental efforts, however, will have to be attempted in this way only as there is no short-cut to success. Our developmental authorities should understand the fact that improper planning and/or red-tapeism in implementing what is planned will have subtle implications in lowering the standards of living of the masses. When once proper identification of resources of all types in all areas is done along with proper planning for utilisation of the material resources, modernisation of productive sectors can be attempted by linking education to various vocations in different areas. This is how education will have to be vocationalised depending upon the resources of the country. In all, it can be said that because of the lack of proper vocationalisation of education the standards of living of a large section of the people in our country is still low, which in turn has made them force their children (both boys and girls) into child-labour, thus coming in the way of education (including

primary education) of the younger children. In other words, children who are supposed to spend their time in schooling are being made to mar their precious time because of the lack of proper socio-economic planning

The third reason as to why primary education in India has not reached the children of the masses is because of the non-flexibility of the very system itself. This means that our primary education system asks each and every child of the country including the children of SC, ST and slum communities and other backward classes to undergo a minimum of three more years of general education even after seven years of primary education before taking up any vocational course. Educational problems of SC, ST, OBC and slum children are not being understood from cultural, anthropological and economic perspectives, because of which also primary education in India has not made a satisfactory headway. For SC/ST/OBC and slum community children, primary education can be of smaller duration (four to five years) followed by suitable vocational training (the nature and the type of vocational courses should be determined by the local needs), when it is difficult to convince the illiterate parents of SC/ST/OBC and slum children about the deferred values of primary education of a long period. In other words, the primary education should be flexible enough to cater to the needs of children of all sections of the Indian population and it should not be advantageous to the child population of only a few sections as is the case in India today. Otherwise, only those children who can complete a long period of general education can get into some vocational course and those children who cannot

complete the same, may be because of many reasons, will have no outlet and perhaps will be the victims of the evil (policy). Continued and prolonged practice of such a policy will also lead to the accumulation of a large number of non-productive individuals, who will be an additional burden for a developing economy like ours. Therefore, the educational system should not be very rigid to ask each and every child of weaker sections to undergo a long period of general education including that of primary education. This is because adult illiterate parents of weaker sections may not first of all have positive attitude to primary education, may be because of different reasons and in such a situation it might be very difficult or even impossible for the developmental agencies to change their attitude towards the primary education of a long period when economic problems often outweigh educational values. As most of our SC, ST, OBC and slum people are often poor, primary education to the children of such groups should be of a shorter duration for 1 to 2 generations which may be increased gradually. Any way, to determine the extent of primary education to be given for the children of weaker sections, anthropological studies covering all aspects of their life will have to be conducted often with their interlinkages with primary education in all SC, ST, OBC and slum communities, so that planners can reasonably chalk-out a programme of primary education to the children of weaker sections. But it is a poor state of affairs that such sort of in-depth, case-studies covering all aspects of SCs, STs, OBCs, and slum communities, life which will have implications for the formational policies with regard to the primary

education of the weaker sections have not been conducted in a large way

The fourth reason as to why primary education has not reached the children of the masses is that Indian primary education system, right from the beginning, is following the single-entry procedure in contrast to multiple-entry procedure. The multiple entry procedure for primary education in India finds its relevance because of the lack of proper socio-economic development which has resulted in the concomitant problems of high rates of wastage, stagnation, absenteeism, non-enrolment among the children of different backgrounds. Such a possibility is more among the SC, ST, OBC and slum sections of our population because economic needs and problems of basic nature outweigh the scope for deferred gratifications like education, worthy use of leisure in productive activities, etc. All these, of course, do not mean that there are no part-time education courses for the children of primary stage in our country, but it only means that they are in a very limited number. And again, the same emphasis and value is not being given to this scheme of primary education by our official agencies like that of formal education. It also appears from the reports that part-time courses are also not being run with full vigour, rigour and seriousness and researches in the field of part-time education are scarce to guide the suitability and adequacy of such courses in different parts of the country. As a result, many children are not getting into such courses in the country and those who are getting in and coming out successfully from these courses are not getting the same status as the products of formal

education. In other words, lack of proper planning and designing the part-time courses along with an overemphasis on formal education in our country has generated a sort of 'high' and 'low' difference among the children of these two schemes.

In addition to the above lapses in the field of primary education, non-formal adult education courses are not being organised seriously to suitably educate and motivate the parents to send their children to schools. Non-formal education, however, is a recent phenomenon in India and it is yet to be conceived in the context of life-long education. In a diversified and stratified country like ours, where different categories of people like rural, urban, tribal and slum, educated and uneducated, rich and the poor, SCs, STs and many OBCs are there, different educational inputs of different intensities are naturally needed for different sections. But the sorry state of adult education programmes in our country is that they have just remained as purely literacy programmes. In addition, for the adults of the poor economic status, the adult education programmes are not vocationally based depending upon the needs and problems of different areas, and for literate adults, these programmes have never been continuing education classes covering all aspects of life, viz. social, economic, educational, political, health and sanitary, cultural and religious. As a result of all these drawbacks, adult education programmes in India have failed to attract the adults for their programmes in most of the cases at the first stretch itself. It is also often heard and read in the newspapers that in many cases, adult education programmes are being shown to have been running fairly at a satisfactory

level although nothing would exist virtually. In those cases where adult education programmes have managed to attract and retain the adults in different parts of the country, proper values about education seems to have not been developed in a very effective manner, as these programmes have restricted themselves for pure literacy campaigning. It should always be remembered that in a country like India where majority of the people are below the poverty line. The basic needs and economic problems of life outweigh the deferred gratifications such as school education, adult education, worthy use of leisure, etc. Therefore, many illiterate parents do not find any motivation either to attend adult education programmes, or to send their children to school. As a result of all these defects, the adult education machinery in India which mainly started to educate the adults on the values of formal education (to make the parents send their children to school) has only remained an attractive possibility of bringing about change and development rather than solving educational problems of adult masses in our country.

The concept of pre-primary education has almost remained a myth even today in our educational system. Almost each and everyone in the field of education recognises the importance of pre-primary education, but intentional and purposeful efforts are not being made seriously to provide this education for the children of all castes and income groups. Experiments conducted in USA have shown that children with pre-primary education achieve 20 per cent better than children without pre-primary education in Standard I of primary education, and the gap becomes 40 per cent in Standard III,

and again, increases to 60 per cent to 80 per cent in Standard V. Such children who have no access to pre-school education will either fail or drop out or pose a number of problems to the classroom teacher at primary stages of education. Psychologists and educationists say that children of lower socio-economic backgrounds when they come to primary school lack a reasonable quantum of vocabulary that is needed to cope with teaching and learning at the primary level and that is why they emphasise on pre-primary education to make up the deficiency of their word power. But as things are not moving in this direction in our country by making provision for facilities of pre-primary education to the children of poorer socio-economic backgrounds, we are only increasing the gulf between the children of lower socio-economic background and higher socio-economic backgrounds from their earlier days of education itself. In other words, although the planners and administrators in the field of education are aware of the value of the instrumentality of pre-primary education to primary and further stages of education, the sorry tale of the Indian pre-primary educational scene is that only a small number of private schools that are scattered throughout the country are catering to a few sections of pre-primary children population—the children coming from the richer socio-economic backgrounds and children of poorer socio-economic backgrounds do not have any access to it. Again, it seems that only purposeful efforts to establish a number of pre-primary schools in all parts of the country along with the right quality of education can only bring the children of poorer socio-economic backgrounds at par with the children of

richer and higher socio-economic backgrounds at the primary stage of education.

The Indian educational system further has not given proper importance and attention to the primary education of the disabled and handicapped children excepting in a few stray cases here and there, as sufficient number of schools needed for the primary education of such children have not been established throughout the country, although in India planners and administrators do recognise the importance of education of the disabled and handicapped children. It is often read in the reports that a large number of children having disabilities and handicaps of various types in most of the rural and tribal areas in our country do not have access to any sort of primary education. Even facilities at secondary and higher stages of education for such children are very much limited in our country. Of course, to provide primary education to the children with various kinds of disabilities and handicaps, what is needed is to pool the children of different areas at specific centres (as sufficient number of children of different handicaps and disabilities will not be available in a large number in all places to open separate schools everywhere) and to provide primary education through a variety of media along with residential facilities of all types. Of course, all this means huge amounts of expenditure for the primary education of the children of different handicaps and disabilities. But there is no way to escape from providing all facilities if we believe in secular and socialistic pattern of living. But the present state of affairs in our country is that such a scope for providing facilities of various types for

the education of the disabled and handicapped children is not being seen in a large way although all such provisions are guaranteed by various articles and clauses of our Constitution.

Besides the above disorganised conditions, it is also often seen in the surveys and reports of NCERT, NIE, Ministry of Education and other national and state level bodies that still there are a large number of primary schools in our country, especially in rural and tribal areas, which are lacking in buildings, equipment, aides, physical facilities and even teachers. No government can escape from providing these facilities as we firmly believe in the egalitarian way of living, which means that education should equally spread to all citizens. It is further believed that to make education instrumental in effecting social change, educational opportunities should be opened up in every conceivable way for the larger sections of people. Therefore, deliberate and purposeful efforts will have to be made to provide the basic amenities and facilities to rural and tribal primary schools too as there is no short-cut for success. An easy way of escape seems to be that of asking the people and the educational machinery at the execution level to tap the local resources to run the institutions. In a country like India, where majority of the people living in villages are illiterate and poor, it is illogical to assume that one can get a fairly satisfactory amount of money to establish schools, to provide facilities of all types to all schools and finally to run the schools on a fairly satisfactory basis. This is also so because, many illiterate parents will not be in a position to probe into the long-standing and deferred values of education, although

a few may be really capable of helping in the establishment and running of the schools by providing monetary facilities. This is how our primary education has been allowed to grow and influence the society in a very passive way. Therefore, at least now, to make a headway in the field of primary education, the needs and problems of primary schools in different areas will have to be understood through systematic macro and micro level surveys. And they should be the guiding points for the reorganisation of the primary education system. Otherwise, from such a policy it can be argued that although a number of primary schools are being established every year to reach the quantitative targets of universalisation of primary education, qualitative improvement in education will not be possible through ill-equipped schools.

It is further a pitiable state of affairs that the quality of education in government primary schools (common schools) in both urban and rural areas of our country today is quite poor when compared to missionary, private and public schools. Although much is spoken on the concepts of 'common school system' and 'neighborhood school system' since the time of the Kothari Foundation Commission's report attempts are not being made very seriously to improve the quality of education in government primary schools by increasing the salary and status of teachers, by arranging frequent inservice training programmes to primary school teachers, by lessening the workload of teachers, by reducing the pupils' strength in each class to a practically feasible extent, by providing all the physical facilities needed to the schools and further by providing books, slates, clothing and mid-day meals to the children

of poorer sections. Even among the non-governmental schools, as it appears from the reports, there is a sort of hierarchy between the public, residential school and private non-public, non-residential schools as far as the quality of primary education is concerned. Among the government schools, quality-wise hierarchy is between urban versus rural and tribal schools. Thus, the present school system in our country is increasing the gulf between the children of the haves who often study in public schools and the children of the have-nots who study in common schools. Education thus, is acting as an instrument of social disorganisation and alienating force among the different sections of the population. Therefore, such subtle, deferred, wrong implications of the poor quality of education of common schools are to be understood with proper foresight beforehand and all efforts would be made to bring the quality of common school education at par with public school education.

From the above account, it can be seen that primary education which has been accepted as the basic need of all citizens in India today has not been attempted properly to initiate and contribute to the manpower-planning process. Primary education in our country has not made enough systematic headway because of lack of proper and effective checks to control the evergrowing rates of children population, lack of judicious socio-economic development of the masses alongwith increased facilities for primary education, lack of flexibility in the number of years children have to spend in general education before taking up vocational courses, lack of adequate and suitable part-time primary education courses, lack of

proper orientation to illiterate adults in adult education programmes to motivate them to send their children to schools, lack of sufficient number of pre-primary schools to the children of the weaker sections to make up the environment deficit of the poor background household, lack of sufficient number of institutions for the primary education of the disabled and handicapped children, poor quality of education in common schools and failure to vocationalise education at the +2 level. In other words, primary education which has to elevate and emancipate the various sections of our society, viz socially backward, economically backward, educationally and culturally disadvantaged groups and fit them into the national stream of modernisation (goals of national development) is only disintegrating the various sections of our society viz, urban and rural, economically well off, socially forward and culturally advantageous groups vis-a-vis urban and rural economically backward, socially backward and culturally disadvantaged groups. In other words, primary education which has been accepted as one of the basic tools of modernisation has only been contributing to the disintegration and widening of the polarity between classes and masses on the one hand, forward castes and backward castes and the culturally advantaged groups and the culturally disadvantaged groups on the other. Lack of proper

foresight and perspective amongst the planners and administrators has led to the rise of very many serious problems at the primary level of education, which even if understood now requires many more years for a solution. Therefore, primary education should be planned according to the needs of the local and bigger communities by undertaking horizontal (exhaustive) and vertical (intensive) educational surveys in different parts of the country at all levels—macro-level surveys at national, state, district and taluk levels to identify the material resources of various types to suitably vocationalise courses in different areas and micro-level surveys at the village level, community-level; and at the individual institutional-level to identify the needs and problems of various communities and to identify the causes of non-enrolment, wastage, stagnation, absenteeism, lack of proper functioning of primary education, adult education, pre-primary education, part-time education, institutions for handicapped and disabled children at primary stages and low quality of teaching in common schools so that primary education can be properly linked up with the socio-economic requirements of different communities to make it a powerful instrument of social and economic transformation of the masses and cultural integration of the different sections of the Indian society.

Implementation of Social Studies Curriculum in Schools : The Nigerian Experience

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The success of social studies in meeting its intended objectives would depend largely on the implementation of the curriculum. This paper is aimed at identifying the main problems being faced in the implementation of social studies curriculum in Nigerian schools. Wrong interpretation, unqualified teachers of the subject and inadequate material support to the teachers have been identified as the main problems facing the social studies curriculum in the schools. It has been suggested that more social studies teachers be trained through the establishment of social studies department in Nigerian institutions of higher learning. Also, social studies teachers should be given greater support services in terms of provision of adequate teaching materials and exposure to in-service education for improved professionalism. Furthermore, Inspectors of Education who supervise social studies teaching in the schools should be given more professional development opportunities to enable them to behave professionally.

NIGERIA is one of the developing nations with a strong belief in education as a means of national development and prosperity. Accordingly, the schools and their curricula are used as vehicles through which solutions are found to national problems and aspirations. Social

studies is rated very highly in the nation's school curricula. It is placed as a core subject to be taught at both the primary and the junior secondary school levels.

The importance which the government places on the teaching of social studies is based on certain accepted national realities.

Among such realities is the nation's multi-cultural multi-lingual society. It is a developing society experiencing rapid social change. It is a dynamic society grappling with enormous economic, social and political problems. A child born into such a society would not just take his place and accept the society as it is. He must be made ready through social studies education, not only to discover the need for unity in diversity which is the nation's strife, but also to be able to take the challenges of such a vast and ever-changing society.

In order that children from the different ethnic cultures in the country live meaningfully together and contribute intelligently to the process of dynamic change and development, they must understand the society, the different people and their problems. They must be able to deal with the various economic, social, political, physical and other human problems around them. Also, they must understand the causes and effects of those problems and the methods of solving them. To be able to do all this, the on-coming generation must be knowledgeable and intelligent on issues inside and outside the nation.

As I have stated elsewhere (Udofot, 1986) the emphasis which the nation places on the social studies curriculum does not, however, suggest that it is social studies alone, without the influence of other school subjects and other factors in the society, that helps in meeting the challenges of the nation's realities discussed earlier in this paper. It is only being acknowledged that the social studies curriculum, if well implemented, could more easily help in shaping the pupils' experiences and their awareness of what

their society and the world are and what they might be like in the future. Social studies could be used to do anything a nation likes to do with it. It could be used to produce revolutionary or conservative attitudes among the people depending on the approach that is used.

But like any other subject on the nation's school curriculum, the success of social studies in meeting its well-intended objectives for the society would depend on the extent of problems experienced in the process of implementation and the solutions found for those problems. It could be hypothesised that like any other subject in the Nigerian school curriculum, social studies experiences some implementation problems which tend to mar its success. The main focus of this paper, therefore, is to examine some of the implementation problems facing the social studies curriculum in the Nigerian schools and to suggest possible remedies for them.

Interpretation

One of the main problems of effective implementation of the social studies curriculum in Nigerian schools is of interpretation. The present social studies curriculum in Nigerian schools is integrated in the sense that it is interdisciplinary in form (Makinde, 1979). The approach is aimed at presenting social studies as an integrated discipline so that the child can see the inter-relatedness of all the factors in his environment and accept his responsibilities in the community through the development of desirable knowledge, attitudes and skills (New S E S Syllabus, 1973).

The existing social studies curriculum is a rethink on the former social studies which emphasised history, geography and

civics as separate subjects. The new social studies curriculum is wrongly interpreted not only by some teachers but also by other practitioners of education like the Inspectors of Education in the subject. As I have also observed elsewhere (Udofot, 1986) years after the emergence of social studies in Nigeria, most teachers, in primary schools in particular, still appear to wonder what social studies is all about. Experience of the author's contact with teachers of social studies in some schools in Akwa Ibom State of Nigeria, shows that some of the teachers still see social studies as a new name for the teaching of geography, history and civics. Others see it as an amalgamation of the three subjects.

As a result of the type of interpretation given to the social studies curriculum, the teaching methods generally adopted in the schools in the teaching of the subject do not reflect sufficient departure from the traditional social studies approach with which the teachers were familiar before the emergence of the existing social studies curriculum. While the social studies objectives, design and content reflect new thinking, the teaching approach is reflective of the old thinking in the social studies curriculum, that of teaching social studies as split subjects of history, geography and civics. In the primary schools it is even now a common practice among teachers to write social studies (history) or social studies (geography). In respective cases, such teachers teach historical and geographical facts.

This wrong interpretation of the new curriculum seems to arise out of the teachers' level of preparedness for the implementation of the new curriculum. If the teachers do not receive sufficient

education in the use of a new curriculum there is the tendency to revert to the old practices with which they are familiar. In other words, it is not easy to change the teachers from their familiar teaching styles. Teachers who were familiar with the traditional single subject approach to social studies in which the pupils learn facts, figures and memorised dates, would find it difficult to change their style significantly in the use of a new curriculum in the same subject, particularly if their new orientation is shallow.

It is known that teachers do not receive sufficient preparation for effective implementation of the social studies curriculum in schools. For instance, some of the colleges of education in the country do not offer social studies (Udofot, 1985). A part of the reason for this is because the subject is not offered in most universities in the country where teachers in the subject would have been prepared. Only very few of the nation's universities offer degrees in social studies. The few universities include the Ahmadu Bello University, Zaria, Obafemi Awolowo University, Ife, University of Jos and University of Uyo. These few universities can only produce few and insufficient number of teachers of social studies for the colleges of education in the country.

Where colleges of education do not include social studies in their curricula for lack of teachers, they tend to continue the teaching of history, geography and civics. Graduates from such colleges, when deployed to schools, would continue to teach geography, history and civics in the name of social studies. This phenomenon could be responsible for the practice, referred to earlier in this paper, of writing

social studies (history) or social studies (civics) or social studies (geography). This is a problem of interpretation arising from the teacher's orientation in the subject which in turn influences the teacher's style of teaching. Even where a few well-oriented social studies teachers are deployed to schools there is a tendency to be influenced by the practices of the majority, thus reverting to the old practice after a short period of implementing the new social studies curriculum using the new methods learnt at colleges

People's Attitudes

Furthermore, lack of inclusion of social studies in most of the curricula of the country's universities has tended to influence people's attitudes towards the subject. People tend to think of the subject as a low status subject compared to single disciplines such as history, geography and civics or political science. Students who offer social studies in colleges of education tend to get worried about the possible subject(s) which they would offer in the university should they desire to continue their studies. This apparent worry has forced some institutions of higher learning to design social studies courses with emphasis on sociology, economics and political science. In this model of social studies each student must, in addition, specialise on one teaching subject such as geography, religious studies, economics, history or Efik/Ibibio.

Prospective social studies students tend to have doubts regarding the high status of the subject. Is it social studies or is it history, geography or political science? When this doubt is allowed to exist in the minds of social studies students it might influence their practices in the school

Students trained in that kind of model might tend to place more emphasis on the single subject combined with the integrated social studies elements in the programme so as to have a subject to lean on for entry into a university for a degree certificate later. Besides, on leaving the university, the students would tend to place more emphasis on the teaching of the single subjects which they combined with the social studies elements for creditability before their colleagues in schools. Otherwise, they might be looked down upon as if they had not specialised in any worthwhile subject

Support Services

Another problem facing the implementation of social studies curriculum in Nigerian schools is the dearth of support service available to teachers of the subject. The term 'support services' as referred to elsewhere (Udofot, 1986) means those services which a teacher receives to help him improve his professionalism, thus enabling him to act more professionally. These services include teaching materials and equipment; supervision by senior professional colleagues like inspectors of schools, headmasters and headmistresses, and opportunities to meet and exchange ideas and views with professional colleagues at conferences and at teachers' resource centres

In Nigeria, the support services available to teachers generally and to social studies teachers in particular are largely inadequate. Also, social studies teachers generally tend to wait for the government to procure them sophisticated teaching equipment for use in schools. The libraries are not sufficiently well equipped,

and the teachers have limited opportunities to attend in-service courses. Lack of sufficient support services to social studies teachers has tended to limit them in their abilities to adopt innovative teaching styles. Avalos (1980) supports this view when she notes that in the developing countries, generally, there is a widespread use of fact-giving techniques with emphasis on rote learning and minimal students' activities because of poor and insufficient teaching facilities.

Besides the inadequate support available to the social studies teachers the inspectors of education in the subject too do not appear to have sufficient support for effective supervisory work. Vehicles and other essential materials and equipment needed for effective supervision are generally lacking. As a consequence, the Inspectors are unable to pay regular visits to the schools. Regular inspection of the schools would help to improve the social studies curriculum implementation process in the schools.

Suggestions

It has been pointed out in this paper that one of the greatest problems facing the implementation of the social studies curriculum in the school is the teachers themselves.

In any educational practice the teacher remains the key person. The level of training he receives can mar or improve the educational results. In the case of social studies teachers also, the level of training they receive can mar or help in the achievement of the lofty objectives the teaching of social studies aim at. For effective education of the

Nigerian social studies teachers, the government should encourage the establishment of social studies departments in more universities in the country. Those admitted into the social studies programme should be motivated students who have interest in the programme. In the universities and in the colleges of education where social studies is offered, the curriculum should be designed to give social studies an integrated approach.

Besides, university and college teachers in the subject should practise what they preach.

As Megarry (1980) suggests,

There is no point in 'telling teachers' about innovative methods, it is far more effective to use them. Teacher educators must practise what they preach. The way to convince teachers that new methods work is not to tell them so, it is to let them discover it for themselves.

Opportunities for social studies students to discover the new orientation to the social studies curriculum in the schools is for them to experience their teachers adopt the new orientation themselves. If you want teachers to cultivate the spirit of enquiry in their students then the training of the teachers should be enquiry-oriented. One of the ways by which we can make prospective teachers encourage critical dialogue and analysis of issues in their students is to train them in subjecting their own behaviours to such analysis (Falayajo, 1976).

The education that social studies teachers need does not begin and end in the universities and colleges of education. As Thompson (1985) observes

"not even the best initial training will be sufficient to equip a teacher for the rest of his career" Social studies teachers require planned in-service education, seminars and symposia as part of their professional development programmes. In-service education, which should cover areas of social studies curriculum designs, methods, use of resources and evaluation techniques should be planned for both social studies graduates and the Nigeria Certificate in Education (NCE) holders. Besides, membership of the Social Studies Association as well as regular attendance at seminars, symposia and conferences should be added requirements for promotion of social studies teachers.

It could also be suggested that while the government should make efforts to give social studies teachers support in terms of teaching materials, the teacher too should try and make use of community teaching and learning resources in their social studies classes. Social studies teachers in Nigeria tend to limit their idea of social studies teaching/learning resources to books and electricity borne resources like the projectors and films. They tend to lose sight of the amply available community resources which can be invaluable for the teaching and learning of social studies. People, institutions, places and events in any given Nigerian community, if effectively utilised, could give the social studies student rich and real experiences of life in their communities.

In this paper, an attempt has been made to examine the main problems in the implementation of the social studies curriculum in Nigerian schools. These problems include the teachers

themselves, the education they receive which has tended to affect their orientation and their interpretation of social studies. It is noted that the teachers do not receive adequate support in the form of materials, in-service education, and supervision which could help to motivate them and enable them to behave more professionally. It has also been noted that the society still tends to look at social studies as a subject without a future, particularly as most of the country's universities do not offer the subject at the degree level.

It has been suggested that in order to give the subject the status it deserves in the country's education, the government should give it greater support in terms of material and staff development through planned in-service education, symposia, workshops, seminars and conferences. Colleges and universities should establish departments of social studies and admit students with interest in the subject, not those who go in to study the subject as a last resort because they have no other subject to choose.

The use of community resources by the teachers of social studies has also been suggested. This could significantly supplement the much-needed material resources for the teaching of the subject. It could, at the same time, make the students more familiar with their community which is one of the essential and ultimate goals of social studies education.

It could be added that for a more effective implementation of the social studies curriculum in schools, Inspectors of Education, who supervise the teaching of the subject in schools, should also be

given adequate professional development. If Inspectors of Education themselves are not given sufficient orientation in the new social studies curriculum, it might be difficult for them to give effective guidance in the curriculum's implementation

process. Inspectors of Education in the subject too should be exposed to planned in-service courses: seminars and symposia on the objectives, content and evaluation of the Nigerian School Social Studies Curriculum.

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Teaching-Testing Proficiency in English as a Second Language : Challenges before Curriculum Planners

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The teaching of English as a second language in India, its objectives and evaluation strategies have been a topic of debate and discussion among the educators and examining bodies. Over the years, a number of approaches have been tried for teaching English in our classrooms. The present article examines these approaches in great detail and identifies certain challenges before the curriculum planners. According to the author how many poems or stories the students have read is not important but the competence generated in them for using the language fluently in a given context is most important.

THE POSITION of a teacher of English in India is indeed an unenviable one. On one hand he is responsible for improving proficiency in English and on the other he is burdened with the task of completing the syllabus consisting of a number of stories, poems, essays and grammatical items. The teachers are responsible for evaluating and analysing the problems of the learners in

the process of internalising the system of English, but more often than not, they do not have an adequate instrument for scientifically gauging the proficiency level or analysing the exact problems of their wards, nor are their experiences or problems shared with curriculum planners. Furthermore, the clear objectives of teaching-learning English at various levels

are rarely spelled out. The teachers, however, are the ones who are always blamed both by the learners and the syllabus planners when expected proficiency levels are not achieved. The learners call them inefficient and the syllabus planners hold them responsible for not translating their theories into practice. Consequently, most teachers become like post offices whose only task is to complete the prescribed syllabus and conduct the tests created and constructed by their respective Boards of Education or Universities.

The attempts at trying to use the syllabus for increasing language proficiency through innovative teaching approaches, are indeed far and few. The teacher rarely gets the opportunity to make the syllabus designers aware of the specific problems of their students. Testing approaches emphasise mostly on awarding marks and not on observing and evaluating the level of performance or the causes behind particular errors and specific problems being faced by learners.

The continuation of this situation creates manifold problems for the learners, their teachers and the curriculum planners. In the absence of a system of evaluation of learners' problems inadequate data regarding the error patterns, both at the level of a sentence and discourse, get generated. In the absence of this, most remedial measures and other modifications carried out in the teaching-learning strategies remain haphazard or, at best, become cosmetic remedies. It has been observed that in many cases areas causing problems are ignored and items which are not so useful for communication get taught and retaught. For example, the emphasis in most teaching programmes is

on drilling of structures and grammatical patterns in the hope that the learners develop the ability to write correct sentences. However, efforts to create the ability to deploy the grammatical rules for generating contextually appropriate sentences are often ignored. This naturally creates a situation where many students even after seven to eight years of English learning are unable to use English even for a simple task like writing an application for leave, though they are often able to correctly do the prescribed grammatical exercises in the classroom.

This, in effect, means that not only are the teaching-learning strategies at fault but even the teaching approaches are inadequate to judge the proficiency levels of the learners. Language, after all, is a process of social interaction (Halliday and others, 1975) and when the teaching-learning process does not produce this capability in students we could say that the system is inadequate. Looking at the system of second language testing in India one observes that the emphasis of tests is on trying to evaluate the ability of the learners to retrieve the information available in the textbooks. Secondly, examiners evaluate performance in these tests with an eye to grade them and not to analyse and categorise problems. Grading is undoubtedly necessary, but if a test confines itself only to the above mentioned objectives, it would cease to be an instrument which can help the teaching-learning system to achieve the desired objectives.

In India, it is true, that except for about five per cent learners coming from elite urban schools, most of the learners have no opportunities for exposure to English outside their English classroom. This, in

effect, means that teaching-testing approaches have to adopt appropriate measures to make up for these deficiencies through more intensive teaching-testing methods. The necessity is for a system which encourages the learners to communicate. The teachers should then identify and remedy the problems. Before looking into the changes that are required in the teaching-testing system, it would be more appropriate to look into the present strategies being adopted in India so that the modifications can be planned in proper perspective.

The Present Teaching-Testing Approaches in India

English teaching in India is mostly a teacher-textbook-classroom affair. The teacher is mostly concerned with paraphrasing the lessons in the textbook, dictating model answers, explaining rules of language operation and taking the students through a series of pattern drills for reinforcement. Since the emphasis is on teaching the text, naturally the emphasis of the tests would be on evaluating knowledge of the facts and information contained in the textbooks. One, therefore, often comes across instances of questions like, 'write the central theme' or 'give a character sketch'. Since the students in many cases do not acquire the language abilities they try to pass the examinations by memorising the answers by rote from cheap notes. This is not difficult as the question patterns are fairly repetitive and can be predicted fairly accurately. It is obvious that these tests suffer from certain shortcomings. The overt emphasis of the tests on the contents of the textbooks and their general tendency to ignore the language abilities creates a

situation which tests memory or at best comprehension. Secondly, as the language is not that of the learners, the errors committed actually reflect problems with memory and not regarding language abilities. The intention that exposure to literature would result in language learning is laudable but the results obtained and the mode of getting these results, unfortunately, do not reflect this.

In recent times, in most of the core English courses reasonable weightage is being given to language skills. In many cases this happens to be about fifty per cent of the total. However, here too the 'vale of tears' (Morrow 1986, p 144) is not really absent. The language portion usually has an essay, a letter and some exercises in grammatical rules like changing the voice, narration, parsing of sentences and supplying appropriate words. The essays are usually on general topics like 'Indian Democracy', 'Student Indiscipline' and on current affairs. In most cases, the topics are beyond the realms of the learner's direct experience and hence they often take recourse to memorising essays from bazaar notes.

Language skills tested through objective type questions like 'insert the preposition' again fail to test the proficiency of the learners in English. Firstly, it is impossible to construct a test covering all the areas of language use and most language areas tested are those which have limited communicative value. For example, changing voice or narration—a very typical language activity used in many teaching-testing situations is something which has limited use in real life situations. Moreover, the ability to perform some activities in relation to some isolated sentences does not necessarily mean that

the learners have the ability to use those skills in a communicative situation (Alam, 1983). In fact, it has been seen in the experiments conducted by Alam in the Chotanagpur region that this often does not happen (1983). For example, insertion of articles and prepositions, is a very common exercise in tests. In many cases it has been observed that the learners do them correctly. However, they commit errors in these very areas when they write an essay or a letter. It is, therefore, not very surprising to see that students coming out of our schools and colleges are unable to use English, in spite of four to seven years of teaching-learning, for elementary communication purposes like writing an application for leave or describing a route to be taken for reaching a destination.

The problem seems to be that the findings of the studies in error patterns of students in various parts of India at different levels have not been adequately looked into. Though most studies like those of Jain (1974), Ganguly (1986), Pathak (1988), and Ganguly (1995) show similarity in error patterns and the problem areas for learners, the teaching techniques and testing approaches have remained unchanged. For example, most of the studies quoted above show that at the level of sentence construction use of the verb phrase is a major problem besides problems in trying to connect sentences to make a discourse. However, our testing and teaching techniques seem to ignore the tenets of transformational-generative grammar, that the grammar operating in the mind of a fluent speaker of the language is far more complex than the grammar at the surface level (Chomsky, 1976, p.4 and 1980, p.133) and no grammar

syllabus can hope to imitate that. Emphasis on teaching structures can, therefore, lead to a problem of deployability of that knowledge in situations outside the classroom as Prabhu (1987, p.16) found out while conducting the now famous Bangalore project.

The basic emphasis on teaching and testing grammatical items as a substitute for trying to develop skills of authentic discourse is perhaps the problem with English in India today. This leaves a gap between the ability of the students as evaluated through the administration of traditional tests and their actual proficiency as observed in a real-life situation where they have to transfer competence into performance. The necessity, therefore, is to analyse the problems of the learners at one level and then devise tasks which help them to deploy the skills of using language to create authentic discourse. This has naturally got to do with our perception about the functions and role of language in life and society.

Language and Tests

To a large extent, our approach to language teaching and testing has been influenced by our views on language and its functioning. In the twenties and thirties, language was considered nothing but a set of structures and knowledge of structures was considered equivalent to mastery of the language (Bloomfield, 1993). This was an age of IC analysis, ABTP and Graded Structural Method. Naturally, the tests emphasised the ability to correct sentences and recognise the patterns of structures emerging from given sentences. Language learning was considered equivalent to the learning of structures and naturally tests

reflected this attitude. In India, we had taken this attitude very seriously and reflected it in our policy for teaching English.

However, the fifties and sixties saw a sea change in this approach towards the role and function of language and the methods of acquiring proficiency in it. Chomsky (1957) distinguished between 'performance' and 'competence' stating that competence related to the knowledge of rules and performance to actual use of those rules to communicate. It was established that though competence and performance were complimentary, they were not identical and knowledge of rules did not automatically lead to the ability to perform. Later, Halliday's concept of the social functions of language (1976) and Widdowson's concept of language as a process of communication (1978) and (1984) brought home the view that the most important aspect of learning language was its use for the purpose of authentic communication. In other words, emphasis shifted from structural analysis of language to analysis of the communicative aspects of language. Testing naturally had to readjust itself to this change in the attitude towards the role and function of language. Naturally, the instruments and approaches to tests also began to reflect this changed approach to language. The emphasis in tests naturally shifted from evaluating the ability of the learners to generate grammatically correct sentences and the ability to spot errors in sentences to the ability to generate contextually appropriate sentences for the purpose of communicating effectively through the medium of the language.

Halliday observes

A child in the set of learning language

makes his own language, learns the culture of his society through language. His task is to create/construct the system of meanings that represent his own model of social reality. This process takes place as a cognitive process in his own head but it takes place in the process of social interaction—the act of meanings is a social act (1975, pp.139–40)

It was this attitude and understanding that began to shape teaching-testing strategies.

This attitude towards language brought in two major modifications as far as understanding of the process of language learning and its objectives were concerned. Firstly, it brought about the realisation that language is a medium of social interaction and not merely a collection of rules. Secondly, drilling patterns through constant pattern practice and reinforcement does not necessarily give competence in use. Because the ability to generate grammatically correct sentences does not mean that one has the ability to generate contextually authentic and appropriate sentences and produce authentic discourse. The objectives of second language learning programmes thus shifted to the creation of communicative proficiency. Most policy papers on the objective of education emphasise that education is not an end in itself but a means to an end and, therefore, learning of English in India must emphasise the ability to use English for purposes which can accelerate the process of development in India like gleaning information which is easily available in English.

Prabhu, while writing an introduction to his Bangalore Project, made a very pertinent point in this context.

The development of competence in a second language requires not systematisation of language inputs or maximisation of planned practice, but rather the creation of conditions in which learners engage in an effort to cope with communication. (1987, p 1).

The tests and the teaching strategies have thus to evaluate not the amount of information remembered from textbooks, or the rules of language and grammar learned by rote but the conditions necessary for creation of competence and how much of it has been acquired by the learner. The attempt here is not to suggest that no grammar must be taught but to say that grammar has to be used for developing competence in rules. Prabhu observes

Both the development and the exercise of grammatical competence is viewed as internal self-regulating processes, and, furthermore, as efforts to exercise competence in response to a need to arrive at or convey meaning (1987, p.2)

It is obvious that our concept of the role and function of language has undergone a sea-change. From the idea that language was nothing but a set of grammatical structures we concentrate more on the functional aspects of language. Obviously, the aims and objectives of teaching-learning English in India also should concentrate on creating the ability to generate authentic discourse. Both the tests and the teaching techniques have naturally to emphasise this aspect. Tests have to evaluate problems and abilities using a series of sentences to express a given situation and not abilities on the basis of some isolated sentences. This naturally means a fresh outlook of the

teaching-testing technique in the light of our changed attitude towards the role and function of language in society.

What Tests Do We Create?

For the construction of a test, therefore, the first question has to be that of deciding how much of the test should be on evaluating competence and how much on performance. Besides, there is also the added problem of deciding the manner of testing. Should the tests be open ended questions like *define a.* or *write a summary*. There is also the possibility of testing proficiency through closed tests like *fill in the blanks, multiple choice question, marks true or false, insert the missing words*. Most of the closed tests are used to test knowledge of rules of usage (Widdowson, 1978, p.1). These are also useful for getting information about the ability to comprehend and recall the information contained in the texts.

Analysing the levels of competence in a second language poses greater problems for the test administrator. If he decides to limit himself to measuring the competence in the rules of language operation he must construct tests in all areas of language operation. This is not easy as there are too many areas and it is not possible to test the learners in all of them within a stipulated amount of time. Besides, as has been suggested earlier, though competence can lead to performance, competence does not guarantee performance. Even if the tests could test all the areas of language use it would be impossible to say that the learner has acquired communicative competence (see Widdowson, 1978, p 1, for an example of this). The question which must be considered is whether the ability to

correctly answer multiple-choice questions, or single-line answers with isolated sentences really reflects proficiency. It must be accepted that learners' ability to correctly answer, objective type questions does not necessarily mean proficiency in the language. Because competence with rules in respect of a few isolated sentences does not always transform itself into the ability to use language in a real-life situation. Besides the objective type tests do not reveal the abilities of the learners to manipulate language to describe a process or an experience.

The other alternative is to ask the learners to write a free-hand essay. This approach has the advantage of being able to evaluate the actual expressive performance of the learners. The skills of expressive performance, as Pit Corder observes, offers the only direct source about the learners' 'transitional competence' (1974, p 124). The various states of the learners in the process of learning English could be evaluated only through an evaluation of the expressive performance of the learners. There is, however, a major disadvantage in this approach. The item analysis and the objective type questions can force the learners to use certain specific areas of language use. However, in a free-hand essay an intelligent learner can avoid using some areas where he is not very confident or has some problems. Therefore, the data generated regarding the problems of the learners in English may not be genuine.

It must, however, be accepted that if a language is considered as a medium of precise communication and if the learners have to be forced to participate in the process of language learning, the essay,

perhaps is the best medium available for language testing. It has the advantage of getting the learners involved in communication and is likely to force them to come to areas which create problems for them. The only aspect which has to be considered carefully is the topic of the essay. Generally, in the examination papers, essays that are to be written are normally on abstract topics like polity and economics or some current events like famous sports events. In most of the cases, since these do not touch the learners directly, the language used is either borrowed or memorised by rote from bazaar notes. The topic must be one which has been experienced by the learners directly and at first hand. This creates a kind of enthusiasm to write and express themselves through the medium of English.

In Mizoram, an experiment was conducted with 509 students of +2 level in some rural and urban institutions. One group was given an essay on 'Indian Democracy' and another on 'How I spent my Christmas Vacation'. It was found that most essays on Indian Democracy (incidentally, this is a common examination topic) were stereotyped, having more or less similar sentences and ideas. It was also observed that many students gave incomplete answers or just wrote a few lines. On the other hand, the descriptive topics evoked a good response. On an average, the learners wrote 280 words each and they made an attempt to express themselves through the medium of English. It was further observed that as they made an attempt to negotiate with English their basic problems with the language also became very apparent. The error patterns that emerged were more or

less reflections of their learning problems. Besides, an additional advantage was that we could get information not only about the errors at the level of the sentence but also at the level of discourse. These errors, like repetition of nouns and misuse of adjectives, were sometimes not errors at the level of a sentence but certainly errors at the level of discourse.

Challenges before the Curriculum Planners

One could, therefore, conclude that the teaching and testing activities of a language teaching programme cannot be delinked from each other. If the emphasis of the teaching-learning system is to involve the learner in the language tasks set before him to encourage him to use the language to communicate in a particular context, the tests have also to follow a similar route. The approach to English language teaching has to aim at developing communicative competence which enables the learners to express notions and functions in English (Wilkin, 1976). This approach is important because what learners want to do through language is more important than the mastery of the language as an unapplied system. The teaching and testing system have to cooperate to ensure the achievement of this objective.

For the curriculum planner, what this means is that their curriculum cannot merely be a list of lessons or grammatical tests to be mastered within a specified period of time. It cannot even merely be as Breen (1981) suggested a 'statement of desired terminal behaviour'. It has to be a statement of context, method and evaluation evolved from a study of the

entry behaviour of learners and the expected use to be made of the language so learned. One has also to be conscious of the abilities and feelings of the teachers also. It has been the experience all over the world that new innovations often meet teacher and student resistance (Deckert, 1987) in the initial stages. If the curriculum were to suggest doing away with the book totally it may make the teachers totally loose all their confidence with themselves.

It may perhaps be useful to keep in mind the points suggested by Munby (1970) for designing a syllabus: (i) it should not be too bookish; (ii) it should provide variety as the needs, interests and capacities for learning of the individual vary; (iii) it should be related to the community life; (iv) it should train students not only for work but also for leisure; (v) it should be flexible to help the teacher plan teaching according to the situation he faces; and (vi) it should be related to the quality of the teachers, facilities available and the needs of the learners.

It is obvious that there are no universal solutions to the challenges of planning a curriculum. These vary from region to region, and sometimes even from State to State. However, what is important is not the differences in the approaches, methods, materials or the tests, but the objective of the teaching-learning programme and the quality and proficiency levels of the learners at the end of the teaching-learning programme. It is not important how many poems or stories they have read, but the amount of ability that has come about to actually use the language to express himself or herself in a given context. This is the real challenge before the curriculum planners.

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Qualitative Learning of Science Students in the Indian Context : Some Determinants and their Implications

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Given the increasing emphasis on science education in India, it has become imperative that we try to gauge the efficiency of science education in secondary schools and determine the extent to which personal, situational and study approach factors affect the qualitative outcome of learning (Q.O.L.) in science subjects. Results indicated that Class X students attained much lower than their expected level of Q.O.L. The main contributing factor to such low levels of Q.O.L. was the lack of deep study approach. The reason for this lay in the fact that in India, social pressure and better job prospects rather than interest, compel a student to opt for science subjects. As a result, the student adopts a surface approach. Among other factors, field independence and generalising ability as well as parental income and education levels also influenced Q.O.L. levels positively.

THE ADVENT of the age of science has seen a general increase in interest in and emphasis on science education. In India, the government has also sought to encourage the study of science subjects by setting up and improving facilities for science education and allocating Rs 4257 crores (\$1 million) for science and technical education in its Seventh Five Year Plan, (Ministry of Human Resource Development Annual Report, 1992). The availability of

better-paid jobs in the science, engineering and medical sectors also triggers considerable parental/societal pressure on students to place more emphasis and effort in studying science subjects. In such a situation, it has become imperative to find out how far students actually attain qualitative learning (in the form of attainment of higher cognitive levels) of science subjects in schools in India. For the sake of a deeper understanding of these

levels of attainment and formulating policies for further improvement, it is also necessary to identify factors which contribute to these levels of qualitative learning of science subjects in secondary schools.

A review of research in the field of qualitative learning suggested two broad categories of variables that exert influence on the level of Q.O.L. These were, on the one hand, personal variables inclusive of psychological and background factors (Shavit and Williams, 1985) and on the other hand, the study approach factors, comprising of the three different study approaches of surface, deep and achieving (Marton and Saljo, 1976, Biggs and Collis, 1982). Among personal factors, various studies have established a connection between field dependence-independence and cognitive development. Satterly (1979) identified significant relationship between field-independence and academic achievement. In schools, where majority of learning materials is presented verbally, a high relationship between verbal IQ and school achievement has been found (Kirby and Das, 1977). In meaningful learning the student is required to grasp the essence of the words, over and above their literal meaning. Thus Verbal Generalising Ability (Peel, 1978) is expected to lead to higher levels of Q.O.L. Background factors of parental income and education levels, being directly related to the extent and type of exposure afforded to a child, should influence his cognitive abilities, (Case, 1985; Jensen, 1969). The different study approaches have also been found to lead to different levels of qualitative learning, (Marton and Saljo, 1976; Biggs and Collis, 1982; Watkins, 1984).

We have, therefore, attempted in the

present study, to gain an in-depth understanding of the efficacy of science education in schools. An attempt has also been made to gauge the extent of influence exerted by the cognitive factors of field-independence, generalising ability, situational factors of parental income and education, and study approaches of deep, surface and achieving on Q.O.L.

Objectives

1. To identify the levels of Qualitative Learning attained by the students in mathematics, physics and chemistry.
2. To ascertain how far the Q.O.L. levels in science subjects are affected by generalising ability and field-independence.
3. To assess the extent of influence exerted by situational factors on the levels of Q.O.L. attained by students in science subjects.
4. To establish the relationship between study-approaches and Q.O.L. levels in science subjects.

Methodology

The sample was randomly selected from Class X students in English medium schools within a 100 km radius from Kharagpur (West Bengal) and consisted of 168 students. The average age of the students was 15 years.

Since school examinations have often been found to be a poor measure of the degree of understanding or qualitative learning of students (Watkins, 1984) tests had been devised to measure the attainment of higher cognitive levels through the structural complexity of learning outcome on the basis of the Structure of Observed Learning Outcome (S.O.L.O.) Taxonomy (Biggs, 1985).

according to the Indian school curricula in mathematics, chemistry, physics (Bhattacharya, 1991) The learning process was measured by the Learning Process Questionnaire, LPQ (Biggs, 1987). The cognitive style of field dependence-independence was measured through the group version of the Embedded Figures Test, GEFT (Oltman et al 1971) Generalising Ability was assessed with the help of the test devised by Peel (Peel, 1978) and later adapted to suit Indian conditions (Bhattacharya, 1990)

Results

Q O L Levels in the Student Population

The distribution of the student population according to the Q O L levels indicated that

- 1 In mathematics and chemistry, most of the students attained a maximum of 'M' (Multistructural) level. The (Relational) 'R' level included the next largest group of students, with the smallest group attaining only the Unistructural or 'U' level.
- 2 In physics, however, the largest body of students progressed only up to the 'U' level, closely followed by the 'M' level group while a very small batch of students attained the 'R' level (Table 1).

Contribution of Personal Variable towards the Determination of Q.O L

Second order partial correlation analysis between personal variables and Q O L.

showed that, of the personal variables generalising ability had the largest contribution to the variance of Q O L while field independence had a smaller influence on the variance of Q.O.L in mathematics and chemistry only. In physics, field independence had the largest significant influence on Q O L followed by generalising ability, variance of the personal variables account for the following percentages of variance of Q O L. ($R^2 \times 100$) in the different areas as

Mathematics	15.2%
Physics	15.1%
Chemistry	22.0%

Role of Situational Variables in Determination of Q.O.L

Semi-partial correlation coefficients (sr_1^2) of each of the situational variables, indicated that higher levels of parental education, specifically, graduate mothers and postgraduate parents appear to influence Q O L positively (Table 2). Increased family income made a significant contribution to the increment of Q O L in all subjects.

Situational factors accounted for the following percentage of Q O L in the three subject areas ($R^2 \times 100$)

Mathematics	14%
Physics	10%
Chemistry	31%

TABLE 1
Distribution of Students according to the Q.O.L. levels

Q O.L. level obtained	Mathematics	Physics	Chemistry
E - R	57	34	69
M	174	116	194
U	37	118	5

TABLE 2

Variance of Q.O.L. in Different Subjects Uniquely Accounted for ⁺¹ by Each of the Situational Variables

Subject (1)	<i>sr_i² of Each Situational Variable ⁺² × 100 (%)</i>							<i>R²</i>
	<i>FS (2)</i>	<i>FG(3)</i>	<i>FPG(4)</i>	<i>MS(5)</i>	<i>MG(6)</i>	<i>MPG(7)</i>	<i>Inc(8)</i>	
	<i>sr₂²</i>	<i>sr₃²</i>	<i>sr₄²</i>	<i>sr₅²</i>	<i>sr₆²</i>	<i>sr₇²</i>	<i>sr₈²</i>	
Mathematics	25 ¹	0.2	20 ¹	0.5	25 ⁺¹	26 ⁺¹	63 ⁺²	162 ⁺²
Chemistry	15 ¹	0	113 ⁺²	36 ⁺²	166 ⁺¹	21 ⁺²	151 ⁺¹	329 ⁺²
Physics	0	28 ^{1*}	29 ⁺¹	14 ¹	63 ⁺¹	47 ⁺¹	23 ⁺	115 ^{+*}

(+1) determined from the value of square of semipartial correlation coefficient (*sr_i²*)

(+2) *sr_i²* = *R²* 1 23... 11 8. - *R²* 1 23... 11 8 (i = 2,3,4,5,6,7,8)

FS/MS School-educated father/mother

FPG/MPG Post-graduate father/mother,

FG/MG Graduate father/mother; n=268, df=7

Influence of Study approaches on Q O L Levels

t-values for the difference between means of deep surface, deep-achieving, surface-achieving group of students showed that

predominantly deep oriented students performed best, followed by predominantly achieving students, while surface oriented fared most poorly as far as Q O L was concerned (Table 3)

TABLE 3

Difference between Means of the Scores in Different Subjects Obtained by Students with Different Study Approaches

<i>Study Approaches of Groups Compared</i>	<i>df</i>	<i>Mathematics</i>	<i>t - values in Chemistry</i>	<i>Physics</i>
Deep-Surface	141	3.95 ^{**}	5.14 ⁺¹	2.91 ⁺¹
Deep-Achieving	239	2.37 [*]	2.11 ⁺	1.80 ⁺
Achieving-Surface	150	2.55 [*]	3.50 ⁺¹	2.17 ¹

^{**} p < 0.01 ^{*} p < 0.05 + p < 0.1

Second order partial correlation coefficients between Q.O.L and study approaches showed that the higher Q O L levels in chemistry and mathematics (Table 1) was largely due to decreased adoption of surface study approach. Increased adoption of deep study approach had a smaller, though significant, effect on Q O L while achieving approach had virtually no effect on Q O L. in physics, it was only decreased adoption of surface study approach which had any significant effect on enhancement of Q O L

The inability of the students to reach Relational or 'R' level (which is expected of students in the age group under investigation) can hence be traced to the fact that the students preferred to adopt a surface study approach. The deep study approach remained latent even among deep oriented students

Regression between study approaches and Q.O.L showed that study approaches accounted for the following percentages of variance of Q.O.L in different subject areas as ($R^2 \times 100$)

Mathematics = 18.0%

Physics = 12.3%

Chemistry = 21.7%

Factors that Affect Study Approaches

Since the absence of deep study approach was found to contribute to the low Q O L levels of the students in the study, it was essential to identify the reason behind this observation. Regression analysis between Study Approach—Personal Regression Variable and study Approach—Situational Variables (Table-4) showed that neither the personal nor the situational factors affected the adoption of deep study approach at all

Personal and situational factors had a small negative effect on surface study approach. The deep study approach arising out of interest in the subject matter itself, is possibly more influenced by teaching/examination methods that create a student's interest in a subject (Sparkes, 1990). In the absence of such factors, the elements of personal and situational factors considered in this study did not seem sufficient to encourage deep approach. As a result, deep approach remained latent in the student and was not used during learning. It was thus not surprising that the majority of the students were found to perform at the Unistructural-Multistructural level; only 20% of the students performed at the Relational level or above.

TABLE 4
Contribution of Personal Variables and Situational Variables towards
Variance of Study Approaches

Study Approach	R ²	
	Personal Variable	Situational Variable
Surface	0.080**	0.060**
Deep	0.018	0.0
Achieving	0.018	0.041*

significant at ** - $p < 0.01$, * - $p < 0.05$

Discussion and Conclusion

Within the realm of higher education in India, 40 per cent of the students graduate in humanities subjects and only 28 per cent graduate in science, engineering and medical stream (DST Report, 1991). Moreover, the present liberalisation of the Indian industry is creating ever greater job opportunities in the science-engineering sector. Some of the largest industrial concerns estimate that it might be necessary for them to recruit as many as 400 additional engineers per year (Rao, 1993). Thus, job prospects are definitely better for people with a science background. This creates a twofold problem within the society:

- 1 Increased parental and societal pressure on students to do well in science subjects, with the hope of securing the better paid jobs in the science-engineering sector in future.
- 2 Availability of better jobs for candidates with a science background over the years has created an impression in the Indian psyche that students with a science background are more intelligent than those with a humanities background.

Under the impression of superior intelligence, a student with a science background is often preferred even in jobs where science education is not required. This situation of immense external pressure causes students with no aptitude or interest in science subjects to try to 'learn' these subjects. Since, in the absence of interest, deep learning is not possible, these students adopt a surface approach and memorise facts and data rather than understand them, leading to lower levels of qualitative learning.

It has already been found in previous studies that teaching methods, mode of assessment as well as structure of the syllabus influence the adoption of different study approaches (Biggs, 1990). The existing education system within the country often creates intense pressure to cover a wide syllabus within a given time, with a preponderance of objective-type questions or subjective assessment of essay-type questions. This further encourages a student to adopt a surface study approach (Fransson, 1977, Dahlgren, 1975). The result is that the student often gets the indirect message that studying involves no more than rote learning and stops bothering to look for meaning in the subject matter. Conversely, a more thought-provoking curricula, with less factual load and assessment-methods focussing on understanding would help encourage a deep approach (Gupta, 1992).

Within the domain of personal factors, abstract reasoning abilities have been found to be higher in more groups, i.e. high SES groups (Jensen, 1969). In India, the child from lower-income homes is often denied the type of exposure through books, personal interactions, etc. that go to develop the reasoning and verbal abilities central to "cognitive competence" required in our system of formal education. They are also unable to afford any extra help in the form of tuition (due to financial constraints) that are available to children from higher income families. Thus, the child from higher SES groups and better educated parents enjoys the benefit of greater exposure, better guidance and advice from parents regarding the advantage of a 'science-based education, in future job prospects. So, not unlike previous findings (Cole and Bruner, 1971),

it is this phenomenon of economic and cultural deprivation, leading to reduction of learning opportunity and inadequate development of symbolic and linguistic capabilities of the child coming from homes with lower income and education levels of parents, that is reflected in the results of the present study.

Therefore, before we can think of promoting science education in our schools, it is necessary to place greater emphasis

on 'understanding' of the subject matter by the student and to examine some of the underlying socio-economic forces that lead to 'qualitative learning'. Such a fresh appraisal of the situation in the field of school learning would help Indian social scientists, teachers and administrators in the field of education to pause and ponder over the best possible manner in which qualitative learning in Indian schools may be promoted.

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Teaching of Zoology through Concept Attainment Model at the Plus-two Level : An Experimental Study

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A study with the post exposure design was conducted on 40 students each of the experimental and control groups to compare the effect of Concept Attainment Teaching Model and traditional teaching method in ten select topics in zoology at the plus-two level. The findings showed no difference in the attainment of concept in the select topics between the experimental and control groups.

It HAS become imperative today that new teaching procedures and methods be tried out for mastering vast knowledge meaningfully and storing it for a long time. But no method can fulfil all goals of education. Joyce and Weil (1985) had proposed a variety of models of teaching to meet the various requirements of learning. Many of them have been tested to prove their effectiveness in the classrooms.

Functional understanding of the subject of study by way of mastering its essential concepts is a fundamental purpose of learning. However, until recently, most educators did not realise

that special teaching procedures can help in the attainment of concepts effectively. What concepts are, how people acquire them, and what conditions impede or facilitate concept learning are all issues that researchers have explored. From these sources, a number of models for teaching concepts have been generated.

Bruner, Goodnow, and Austin (1967) begin with the assertions that the environment is so diverse and we humans are able to discriminate so many objects and aspects of objects that to cope up with such an environment, we engage in the process of categorising which enables us

to reduce the complexity of the environment and also helps us to reduce the necessity for constant new learning.

Bruner and his associates have proposed the Concept Attainment Model of Teaching (coming under the Information Processing Family) for helping learners for meaningful attainment of concepts. There are three variations of the model. The first Concept Attainment Model is concept attainment under Reception Conditions. The second is that under the Selection Conditions and the third is the Analysis of Concepts in Unorganised Data

The Reception Model is more direct in teaching students the elements of a concept and their use in concept attainment. The Selection Model permits students to apply this awareness of conceptual activity more actively by using their own initiation and control. The third variation of this Model transfers the attainment activity to a real-life setting using unorganised data.

Many of the available studies using Concept Attainment Model are conducted on school children (Shayer and Wylam, 1981; Muneer, 1988, Chaudhari and Validya, 1990). Though Concept Attainment Models can be used with all ages and grades, children of lower ages can learn better from the Reception Strategy of the Model while the Selection Strategy would be the better one for those of higher ages. As the present study was on the plus two students, the selection strategy is used in the study.

The study was conducted with double group post exposure experimental design. One group was the experimental group to which the Concept Attainment Model was given as the treatment. The other group was the control group which was taught the same content in the traditional method.

The attainment of the select concepts was measured for both the groups and the difference was statistically examined.

Objectives

- 1 To find out whether significant difference exists in the mean scores of concept attainment in zoology between pupils in the experimental group and control group for the total sample of boys and girls
- 2 To find out whether significant difference exists in the mean scores of concept attainment in zoology between pupils in the experimental group and control group when the groups are equated for intelligence

Hypotheses

- 1 The mean scores of concept attainment in zoology of the experimental group will be greater than that of the control group for the total sample, boys and girls
- 2 The mean scores of concept attainment in zoology of the experimental group will be greater than that of the control group when both the groups are equated for intelligence.

Methodology

Sample

To make the sample handy, 40 students from the first year of the plus-two class, each from two divisions of the same institution, were selected for the study. One group was treated as the experimental group and the other as the control group. To avoid contamination between the groups, they were selected separately from students attending classes in the morning and afternoon shifts.

Tools

The tools used in the study were

- 1 Lessons based on selection concept attainment model of teaching of Bruner et al
- 2 Lessons based on traditional method of teaching.
3. Concept-attainment test in zoology for the select concepts, and
- 4 Kerala University Group Test of Intelligence for Adults (Nair & Amma, 1978).

Tools 1 to 3 were prepared by the investigator.

The selected topics for the study were the following.

- 1 Systematics—Taxonomy, Binomial nomenclature, etc.
- 2 Phylum Protozoa—General characters and examples—2 lessons
- 3 Phylum Porifera—General characters and examples—2 lessons
- 4 Phylum Platyhelminthes—General characters and examples—2 lessons
5. Phylum Aschelminthes—General Characters with examples—2 lessons.
- 6 Phylum Annelida—Salient features with examples—2 lessons.

An outline of the lesson plan based on the Selection Concept Attainment Model is furnished below

The Phases and Activities of Selection Model

1 Syntax

- | | |
|-------------|---------------------------------------------------------------------------------------------------------------------------------|
| Phase one | Presentation of data and identification of concepts
Teacher presents unlabelled examples, students ask whether 'Yes' or 'No' |
| Phase two : | Classifying unlabelled examples as 'Yes' or 'No' |

Teacher confirms the hypothesis, gives the name, and helps arrive at the restatement of the definition, students generate more examples

Phase three · Discussion of the process, how the students may think/hypothesise

2. Social System

Teacher carefully prepares in advance the exemplars and the non-exemplars Teacher acts as the recorder, provides additional examples, students inquire of which are the positive ones. Moderately structured

3 Principles of Reaction

Supports pupils' hypotheses, creates dialogue, again becomes supportive at the final stage.

4 Support System

Materials both positive and negative exemplars

An outline of the lesson plan based on the Traditional Method is given below

Lesson Plan for the Traditional Method of Teaching

1 Syntax

- | | |
|-------------|--------------------------------------------------------------------------------|
| Phase One | Introduction of topic and new terms |
| Phase two | Teacher defines the terms and explains them with the aid of diagrams or charts |
| Phase three | Asking review questions and drilling the answers |

2 Social system

Activities teacher-centred. Teacher introduces the content and develops the lessons by explaining Students' participation limited

3. Principles of Reaction

- i. Introducing the lessons by telling.
- ii Explaining the content with the help of drawings or charts.

- iii Evaluating the level of learning upto understanding and application
- 4 *Support system*
 - i Materials as specimens, charts or diagrams
 - ii Teacher with the mastery of content

Ten lessons each on the same select topic mentioned elsewhere were thus prepared for teaching through Concept Attainment Model and Traditional Method separately

The Concept Attainment Test in Zoology was prepared by the investigator for which high level of criterion validity against class marks in zoology (0.75) and split half reliability (0.88) were obtained. It contained 50 multiple choice items on the select concepts from the select topics. The intelligence test used was a standardised one

Procedure

The study took almost one month's time to complete the teaching for both the

experimental and the control groups. The same teacher taught all the lessons for both the groups. Thus all institutional variables, teacher variables, and content were controlled for both the groups and only the teaching methods varied between them. After the completion of teaching, the necessary data were collected from both the groups

Analysis

The data was analysed using the 't' test and the significance of the difference in means was tested for appropriate degrees of freedom. For the equated groups the 't' was calculated directly from the raw scores by the difference method.

Result and Discussion

The results of the 't' test of the mean of concept attainment in zoology between the experimental and the control groups for the total sample, boys and girls, are given in Table 1.

TABLE 1

Significance of Mean Difference of Concept Attainment in Zoology between Experimental and Control Groups

<i>Sample</i>	<i>Experimental Group</i>			<i>Control Group</i>			<i>C.R.</i>	<i>t value for significance at 0.05 level</i>
	N_1	M_1	$S.D. _1$	N_2	M_2	$S.D. _2$		
Total	40	35.50	6.79	40	35.25	7.58	0.16	1.99
Boys	16	33.38	6.93	17	37.09	6.89	-1.54	2.04
Girls	24	36.50	6.81	23	33.68	7.67	1.33	2.02

The critical ratios presented in Table 1 show that none of the samples is different in its concept attainment between the experimental and the control groups. Hence it shows that the level of concept attainment in zoology will be similar when teaching is done either through the Concept Attainment Model or through the traditional method.

The pupils from the experimental and the control groups equated for intelligence also were tested for their concept attainment. The matched pair technique was adopted for identifying the equated groups. From the data, 10 pairs were thus obtained. The results of the analysis are given in Table 2.

Model of Teaching have no special advantage over the pupils who received lessons through the Traditional Method of Teaching in their attainment of concepts in zoology.

The explanation for this finding may be the following. The sample of the study belonged to the age group of 15+. According to some other psychologists (Piaget), at this level even abstract cognitive operations are possible without much influence of the varied teaching situations. The students are capable of conceptualisation without much difficulty at the age of 15+. Enriched learning environment, teaching method and the intelligence level of the learner

TABLE 2

Significance of Mean Difference of Concept Attainment in Zoology between Experimental and Control Groups Equated for Intelligence

<i>N</i>	<i>D</i>	<i>D</i> ²	<i>CR</i>	<i>t value for significance at 0.05 level</i>
10	23	285	1.43	2.26

Table 2 also shows that there is no significant difference in the mean scores of concept attainment in zoology between the experimental and the control groups equated for intelligence. This means that the pupils of the same level of intelligence also do not differ in their attainment of concepts in zoology, though they are taught through the Concept Attainment Model, from those taught through the traditional method.

From the above findings it can be concluded that the pupils who received lessons through the Concept Attainment

may influence learning. Still, unless and until the learner consciously makes an effort using suitable learning methods and study habit, effective learning need not result. So the reason for the present finding may be that the students of both the experimental and control groups being at the age level with the capacity for self learning, might have used the same learning methods, such as the meaningful learning methods. Hence, the different teaching methods used might not have resulted in variation of the product, i.e. concept attainment in zoology.

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Educational News

Pandit Sunderlal Sharma Central Institute of Vocational Education : A Profile

PANDIT Sunderlal Sharma Central Institute of Vocational Education (PSSCIVE) was formed with the erstwhile Department of Vocationalisation of Education of NCERT, forming its core.

The PSSCIVE is a constituent unit of NCERT which is an autonomous organisation of the Government of India. It is located at Bhopal and is the National Apex research and development organisation in the field of vocational education.

The mission of PSSCIVE is to strengthen and upgrade both vocational education as well as Work Experience/ Socially Useful Productive Work at all levels of education in general and school education in particular in every possible manner. It thus brings about new consciousness and perceptions among those who are involved in vocational education, for example policy makers, decision makers, implementers, etc. In short, it is a resource institution which is in a position to provide its expertise experience and resources, wherever they are needed in the country.

The programme of Vocationalisation of Education was launched in 1976-77. The NPE—1986 gave a new impetus to the programme. In pursuance of the policy, the national efforts are being guided by the Centrally Sponsored Scheme (CSS), which came into operation with effect from February 1988. It provides funds for infrastructural facilities, development of management system, curriculum development, teacher training, etc.

A well-knit management system is being built up under CSS at National, Regional, State, District and Institution levels for carrying out four categories of functions, namely :

- (1) Policy formulation and coordination
- (2) Administration and supervision
- (3) Research and development
- (4) Examination and certification

For policy formulation and coordination, JVE is the national level body. For the other functions SCVE, BVE and DVEO are being established at State and district levels.

The examinations and certification

responsibilities are shouldered by CBSE, National Open School, ICSE and State Boards. Boards of Apprenticeship Training (BOAT) are placing vocational passouts for apprenticeship training in the respective regions

Activities

- 1 To conduct regular long and short duration courses for managerial staff development and to organise in-service training courses on regular basis for vocational teachers.
- 2 To formulate and maintain a networking of various types of institutions working in the area of vocational education and other R & D institutions
- 3 To organise student support services.
- 4 To develop bridge courses for lateral and vertical mobility of vocational students
- 5 To conduct periodic review, monitoring and evaluation
- 6 To develop and evaluate curricula and instructional materials
- 7 To bridge and foster international linkages
- 8 To promote and facilitate on-the-job training and apprenticeship training of the products for vocational education.
- 9 To conduct special programmes for the handicapped, women, SC/ST, etc.
- 10 To conduct orientation programmes for various types of functionaries such as principals, state officials, survey workers, coordinators of curriculum and instructional materials development programmes, coordinator of teacher training programmes.
- 11 To institute an information system of vocational education for ensuring constant communication between the Central and State Governments, nodal agencies, directorate, district level authorities and institutions alongwith employers' organisations and to function as clearing house of information for national as well as international agencies
- 12 To provide expertise to the UGC and universities to develop model curricula for undergraduate level vocational course
- 13 To provide consultancy to State Government agencies, international organisations and foreign countries, particularly in the Afro-Asian region
- 14 To develop exemplar multimedia packages of instructional materials and to evolve and implement a phased programme for large-scale development of such materials to meet the diverse needs of a variety of vocational and Work Experience programmes.
- 15 To perform the functions of intensive monitoring and evaluation of vocational and Work Experience programmes for achievement of stipulated targets and maintenance of quality standards
- 16 To develop non-formal, flexible, need-based vocational programmes for neoliterates and youth who have completed primary education, school drop outs, persons engaged in work and the unemployed as well as the partially employed
- 17 To develop and try out generic vocational courses

Functions and Activities

The functions and activities of PSSCIVE are stated as follows

Functions

1. To ensure the uniformity of patterns in the content of a national system of vocational education, to maintain quality and standards (including those of the teaching profession at all levels), to study and monitor the educational requirements of the country as a whole in regard to preparing manpower for development, catering to the needs of research and other studies in the related and supportive areas, looking after the international aspects of vocational education and human resource development, and in general, promoting excellence at all levels of various types of vocational education programme, both formal and non-formal throughout the country
2. To undertake, guide and coordinate, curriculum development training, orientation, dissemination, extension, research and monitoring and evaluation and to offer consultancy to State Governments and other institutions in the area of Work Experience and vocational education, both formal and non-formal
3. To advise and assist the Ministry of HRD, Government of India, and other State Governments on the implementation of vocational education and Work Experience programmes
4. To function as the technical wing of the Joint Council of Vocational Education and the Ministry of HRD on all matters relating to vocational education and Work Experience.
5. To promote, supervise and guide the establishment of a comprehensive management system for vocational education at different levels, i.e. national, regional, State, district and institutional.
6. To function as an overall national resource institution in the area of Work Experience and vocational education programmes both formal and non-formal.
7. To establish equivalences of certificates and accredit vocational institutions keeping the quality parameters in view.

Academic Divisions

The PSSCIVE has six academic divisions which are

1. Division of Agriculture Area Vocations
2. Division of Business and Commerce Area Vocations
3. Division of Engineering and Technology Area Vocations
4. Division of Health and Paramedical Area Vocations
5. Division of Home Science Area Vocations
6. Division of Humanities, Science and Education Area Vocations

Each division will be headed by a professor and will consist of six to eight academic staff.

Publications of PSSCIVE in the field of Vocational Education are shown in the following Table

TABLE

<i>Sl No</i>	<i>Area</i>	<i>No. of Publications</i>
1	General	07
2	Guidelines	
	(a) Vocational Education (VE)	10
	(b) Work Experience (WE) SUPW	07
3	Reports	
	(a) Reports of National Seminar on VE	09
	(b) Reports of National Seminar on SUPW/WE	03
	(c) Reports of UNESCO-Sponsored International Seminars organised by NCERT	05
	(d) Other Reports (VE)	06
	(e) Other Reports (SUPW/WE)	07
4	Charts and Posters	02
5	Bulletin	04
6	Brochures	04
7	Popularisation folders of Vocational Courses	62
8	Studies	
	(a) Studies in the field of VE	27
	(b) Studies in the field of SUPW/WE	10
9	Competency Based Curricula in Vocational Courses	81
10	Instructional Materials in Vocational Courses	77
11.	Instructional Materials in SUPW/WE	37
Total		358

Source : Joint Director, PSSCIVE (NCERT), 131 Zone II, M.P. Nagar, Bhopal 462 011

Book Review

Using 'Lotus 1-2-3' with Exercises

by

NELDA SHELTON AND SHAROW BURTON

Galgotia Publications Pvt Ltd , New Delhi, 1992, pp 490, Price not given

Lotus is one of the most popular versatile Spreadsheet package. Spreadsheet application package is designed to allow one to create, manipulate and analyse data to be quickly organised in columns and rows. Lotus 1-2-3 is an exciting and impressive piece of Computer Software. It integrates graphics, data-bases and other functions into the program which helps to project different types of graphical outputs like Bar chart, Line graph, Pie-chart, etc. In spite of the package being menu based which helps the user to navigate the software, it may, at first glance appear to be too complicated to individuals otherwise unfamiliar with it.

Thus a reference guide is a helpful tool to understand the different functions better and gain familiarity with the package.

Using Lotus 1-2-3 with exercises is in the Houghton Mifflin Software Solution Series which have other related publications in different application packages, i.e. dbase, PageMaker, etc.

This book introduces Lotus 1-2-3. It is organised into easy-to-manage pieces, i.e. Modules. Each Module has closely related set of instructions to help explain each Lotus function. Particularly useful for the beginners is the overview of computer, i.e.

the basic elementary skills given at the beginning of the book.

The illustrations used in this book help to do a good job in highlighting a particular idea. They help understand the commands and their applications. The summary of the concepts and commands at the end of each chapter is a useful feature of this book. The total summary of Lotus 1-2-3 commands at the end of the book helps to quick-check the syntax of the actual command. Application exercise in the appendix gives ready-to-do examples for understanding the steps to be followed for creating one's own application.

In spite of these features this book may not appeal to the user having familiarity with Lotus. Some of the major drawbacks one finds are detailed below.

In the appendix the installation of the package in the hard disk should have been included. For running any application package it is mandatory to tell the users the installation method so that they can from further onwards run the package directly from the system.

The usefulness would have been enhanced if it was separated into two sections, i.e. one a recommended learning sequence for beginners and then an

elaboration of some of the features. It could have helped users to understand the other additional capabilities of Lotus 1-2-3 Package. Additionally, it would have allowed users having elementary skills in using this package to skip the learning sequence.

Some common errors one encounters during running this package should have been included in the appendix. The graphical features which has made Lotus one of the most likeable packages should have been illustrated further.

Also, some useful tips and tricks like data transfer from dbase to Lotus and vice-versa, changing the type of the printer, i.e. with examples of some common printers and similar utility features could have increased the usefulness of this book.

Further, the book explains the features of Lotus 2.01. Already, DOS

Release Version 3.0 and Window Lotus Versions are available and users are switching over to the higher version to have additional features and capabilities. In this context, this book may be outdated for a large number of users. However, one has to keep in mind that knowing basic skills will help the users to easily adapt to the higher versions.

In spite of these drawbacks, this book will be particularly useful for beginners. Educators and instructors can use this book to organise their lecture and use some ready-to-do examples which are provided. But they must be clear that they require a more elaborate reference guide to further explore and teach the full features of Lotus.

Overall, a useful book to own if you are a user of Lotus. Being an Indian edition, it is affordable also.

SUJIT BHATTACHARYA

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